

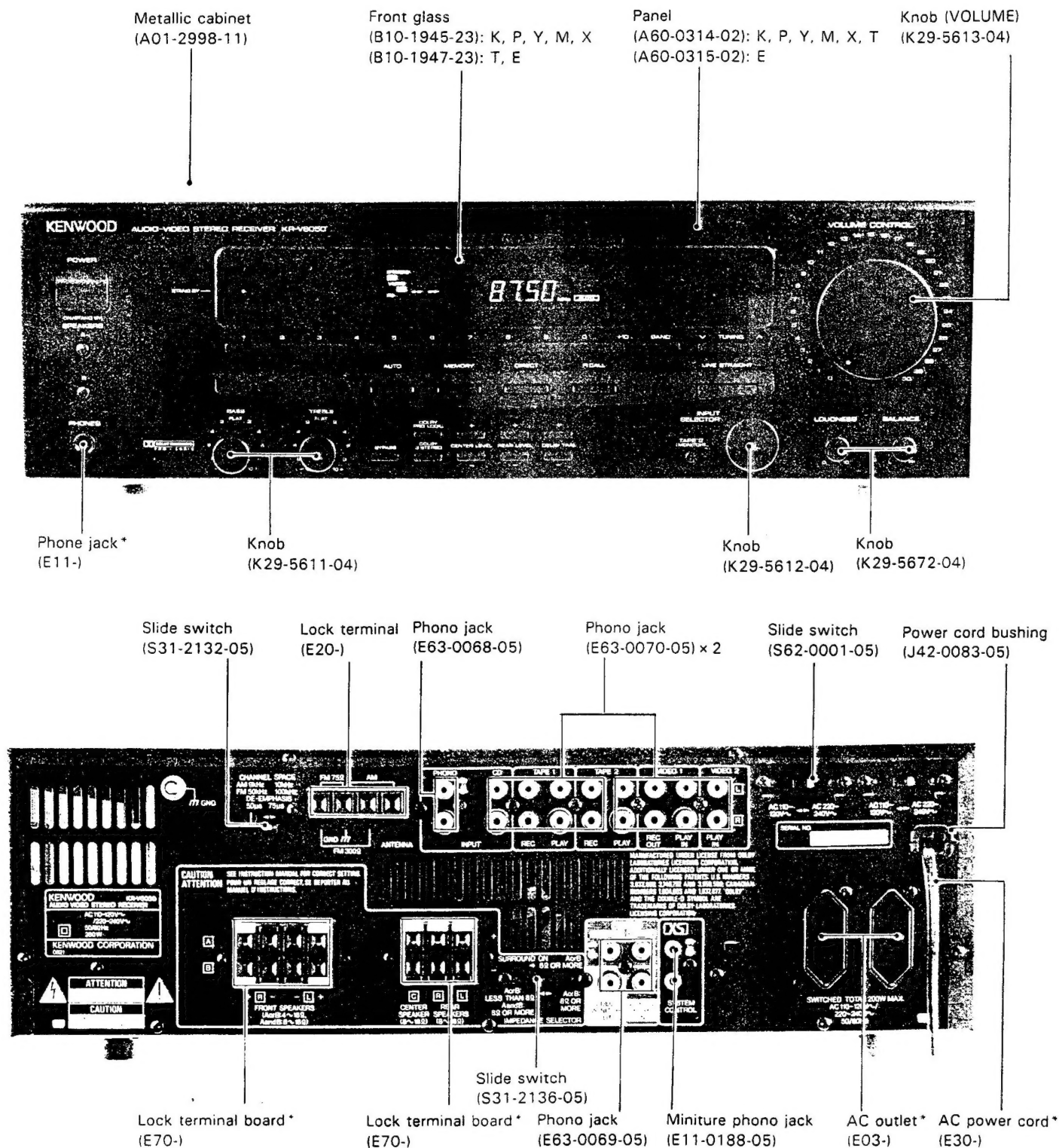
## KR-V6050/7050

## SERVICE MANUAL

KENWOOD

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KR-V6050



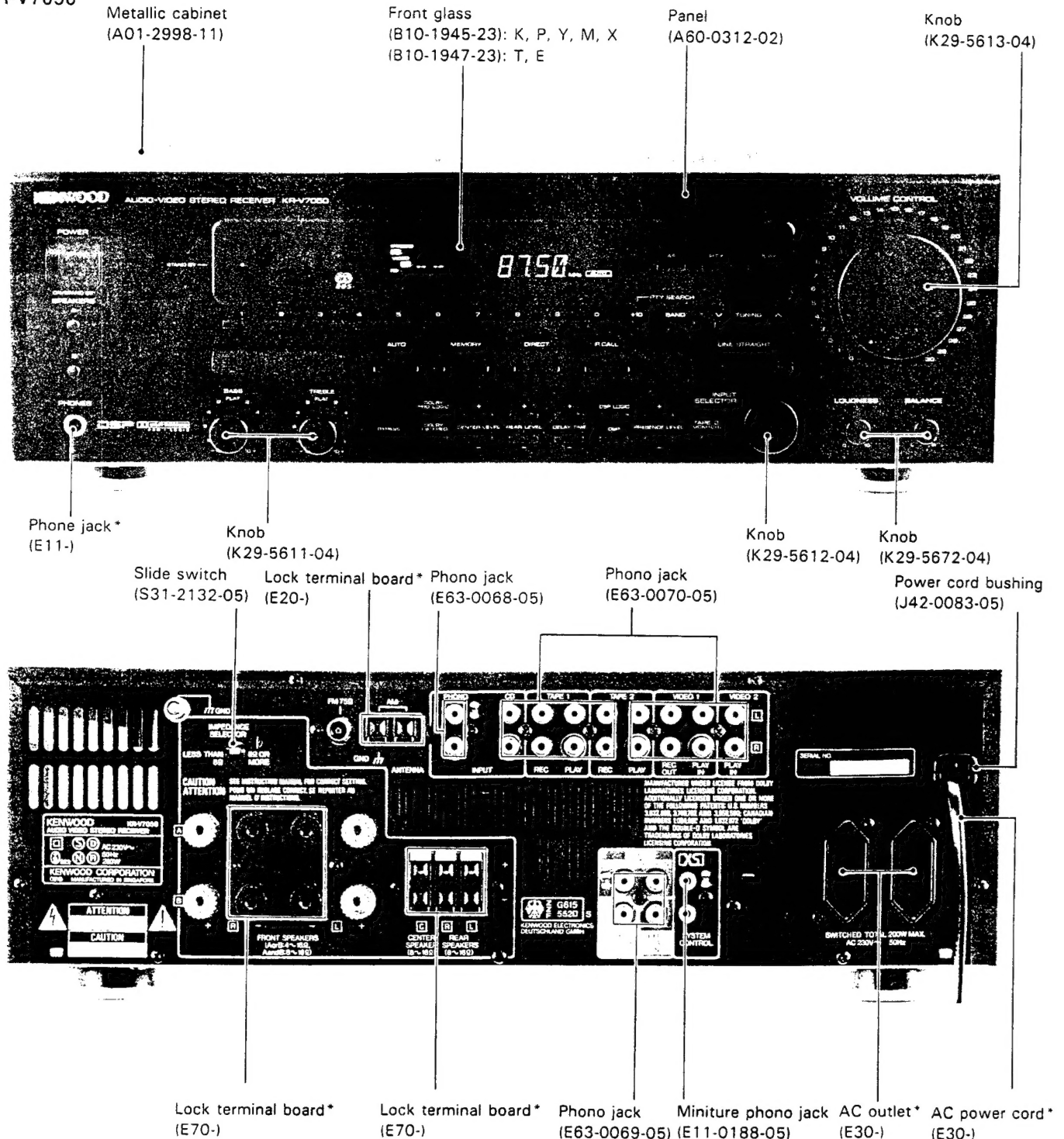
\*Refer to parts list on page 83.

# KR-V6050/7050

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### KR-V7050



\*Refer to parts list on page 83.


# KR-V6050/7050



## FUNCTION

	KR-V6050			KR-V7050		
	K,P,M,Y,X	E	T	K,P,M,Y,X	E	T
PRO LOGIC/3 STEREO	○		○	○	○	
DSP/DSP LOGIC				○	○	
RDS (AF, PTY, DISPLAY)		○	○			○
Large SP Terminal		○				○
MUTE (Remote control unit)		○		○	○	

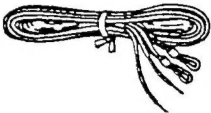


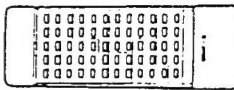
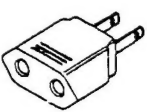
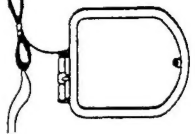

○: There is the function

[SPEAKER IMPEDANCE SELECTOR and SURROUND OUTPUT]

KR-V6050: When the IMPEDANCE SELECTOR is in  position, sound is not output from the center and rear speakers.

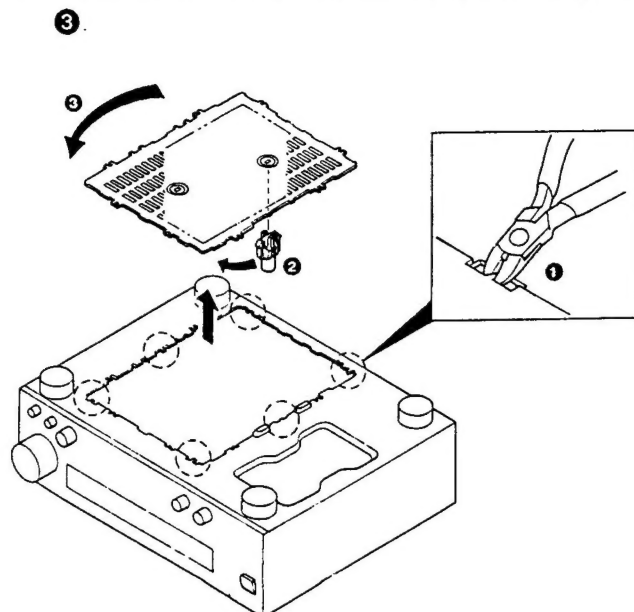
KR-V7050: When the IMPEDANCE SELECTOR is in  or  position, sound is output from the center and rear speakers.

## Accessories

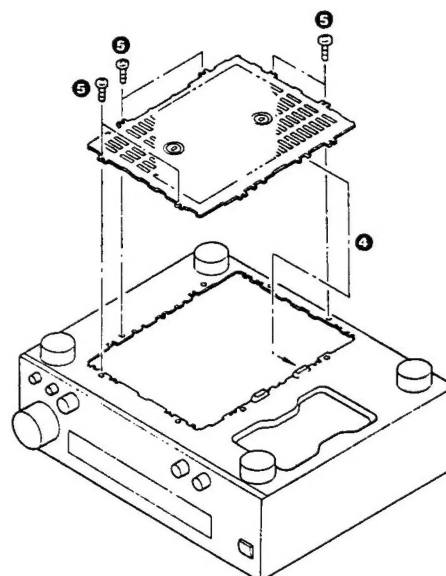
FM indoor antenna ..... 1 (T90-0175-05)	Loop antenna holder ..... 1 (J19-2815-04)
	
Batteries (*R03* or *AAA*) ..... 2	Remote control unit ..... 1
	<b>KR-V6050</b>
AC plug adaptor ..... 1 (E30-0115-05)	
	A70-0925-05 KPVMXT A70-0926-05 E BATTERY COVER A09-0106-08
(Except for some areas)	Remote control unit ..... 1
AM loop antenna ..... 1 (T90-0174-05)	<b>KR-V7050</b>
	
	X94-1010-91 KPVMX X94-1011-11 TE BATTERY COVER A09-0126-03

## Removing the chassis for repair.

1. Cut the 6 places with a pair of nippers. ❶
2. Move the unit holder from the current position to the open mounting position. ❷
3. Rotate the lid, which was cut off, by 180° degrees. ❸



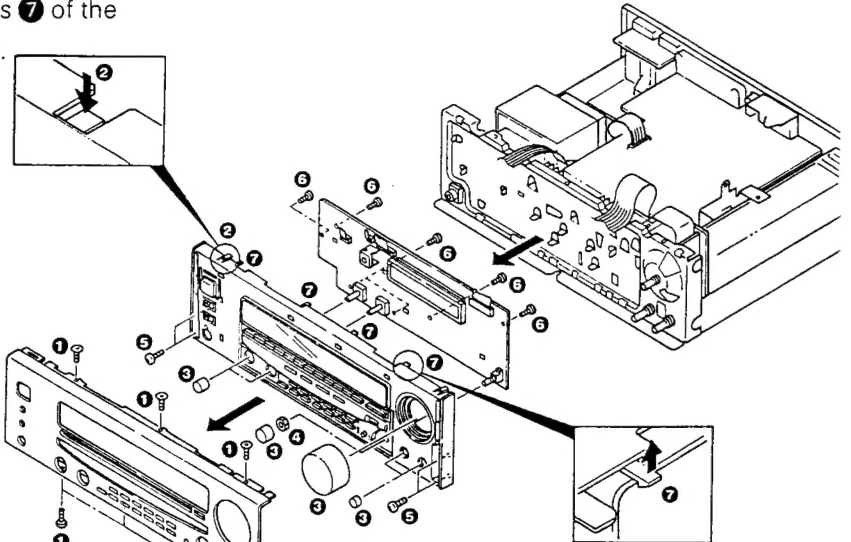
4. Insert the lids in the 2 places of the chassis ❹, and mount them with the 6 screws (3 × 6) ❺.



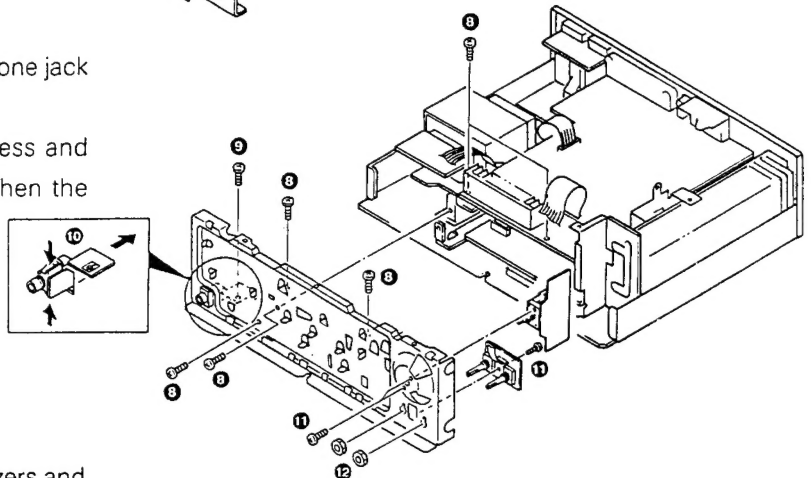
# KR-V6050/7050

## DISASSEMBLY FOR REPAIR

1. Remove the 6 screws ❶, press the 2 claws ❷ of the sub-panel, and remove the front panel.
2. Remove the 6 knobs ❸ and the nut ❹.
3. Remove the 4 screws ❺ and remove the sub-panel together with the circuit board.
4. Remove the 6 screws ❻, pull the 14 claws ❼ of the sub-panel, and remove the circuit board.

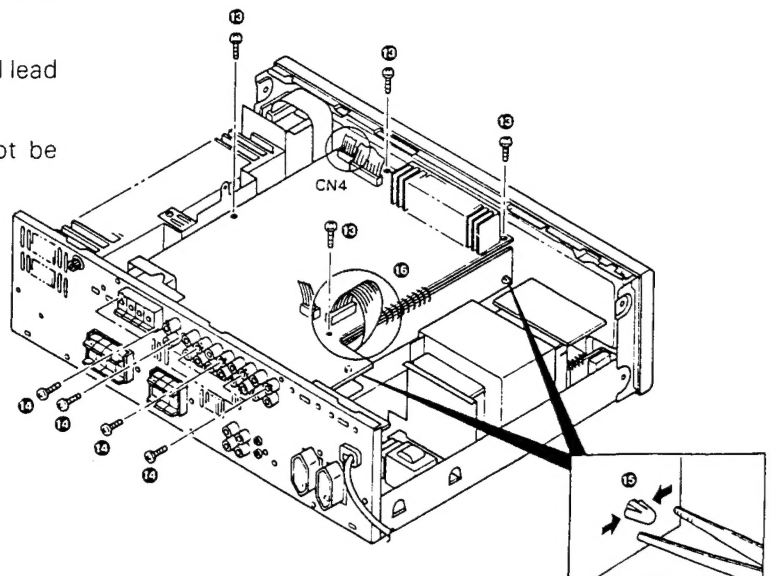


5. Remove the 6 screws ❸, and pull out the sub-chassis.
6. Remove the screw ❾, and disconnect the phone jack by pressing the claw ❿.
7. The volume control (X13) (D/6), the loudness and the balance (X13) (E/3) can be removed when the 2 screws ⓫ and the nut ⓬ are removed.



8. Remove the 4 screws ⓫.
9. Remove the 7 screws ⓬.
10. Hold the extremity of the 2 clamps with tweezers and the like, and remove the circuit board ⓭.
11. In the case of the E. T type, remove the parallel lead wires of CN4.

\*When assembling, take care for the cord not be caught between the two circuit boards. ⓮.





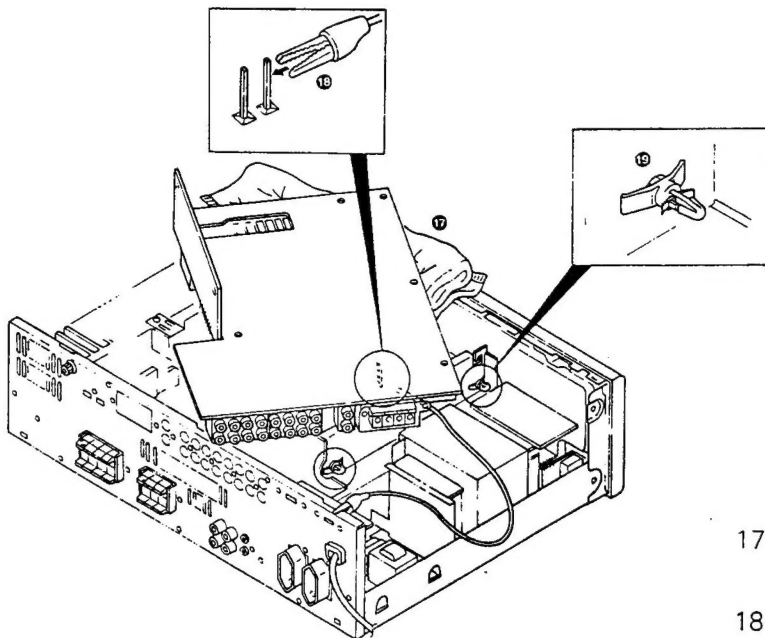
# KR-V6050/7050

## DISASSEMBLY FOR REPAIR

After removing from <X14> PCB body.

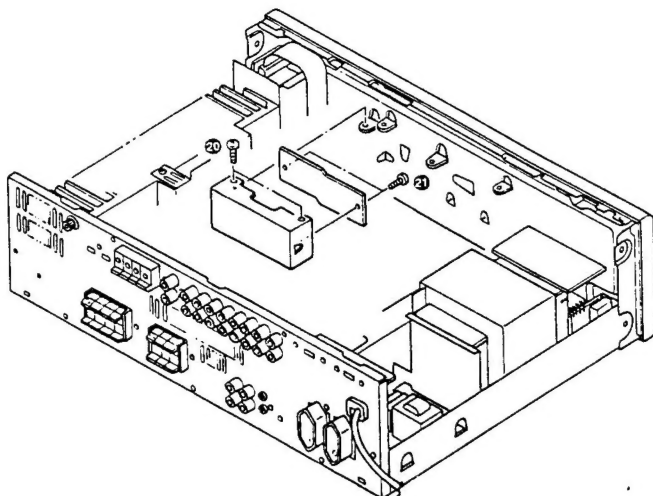
12. Turn the circuit board as a whole upside-down, and lay a piece of cloth between the circuit board and the chassis. 17.
13. When checking the tuner unit of X14, make sure of connecting the GND (TP17) of the tuner unit with the GND of the chassis with an alligator clip and the like. 18.

\*When assembling, position the clamps parallel to the chassis. 19.

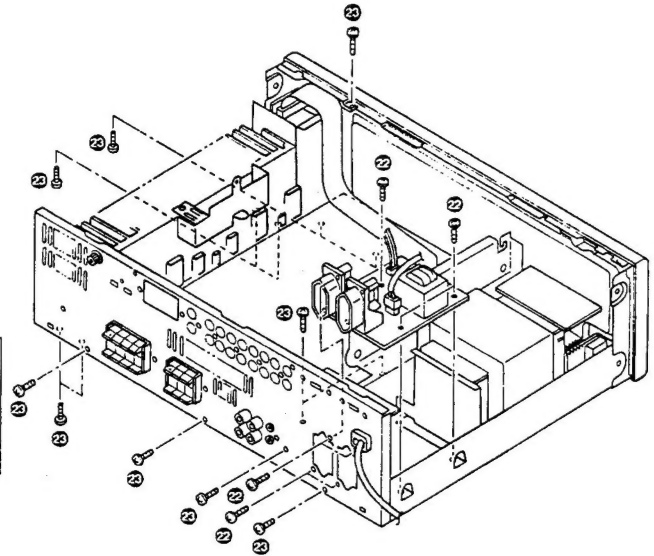


Removing the RDS unit.

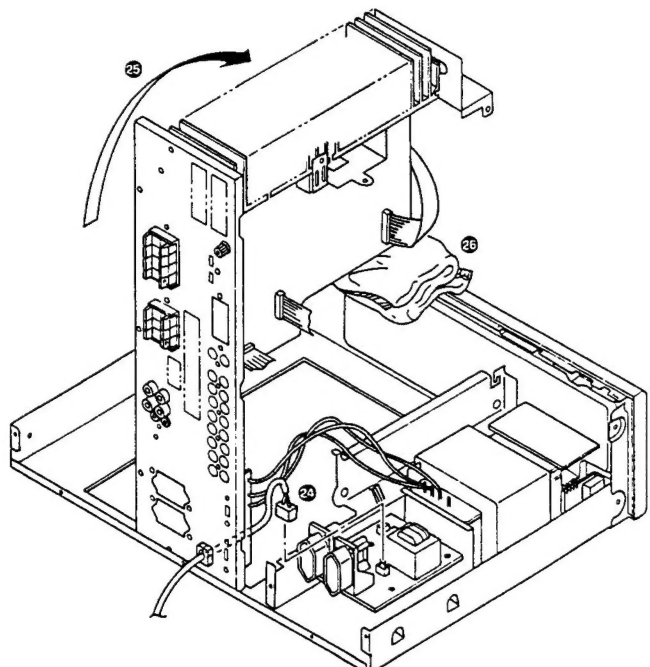
14. Remove the 2 screws 20, and then remove the screws 21 to remove the circuit board.



15. Remove the 7 screws 22, and let the circuit board get afloat.
16. Moreover, remove the 15 screws 23.



17. Undo the connector (CN4) 24 of the circuit boards (X13) (B/6).
18. Put up the main circuit board sideways. 25.
19. Lay a piece of cloth between the main board and the chassis. 26.

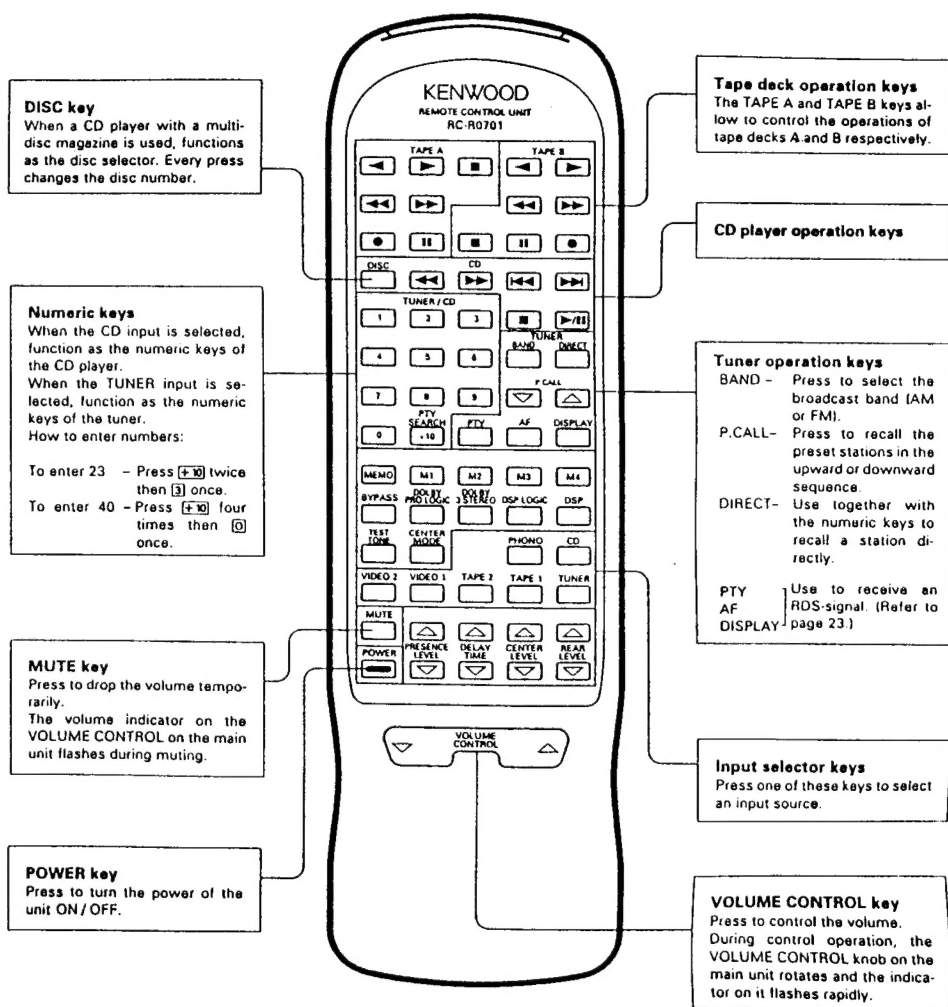
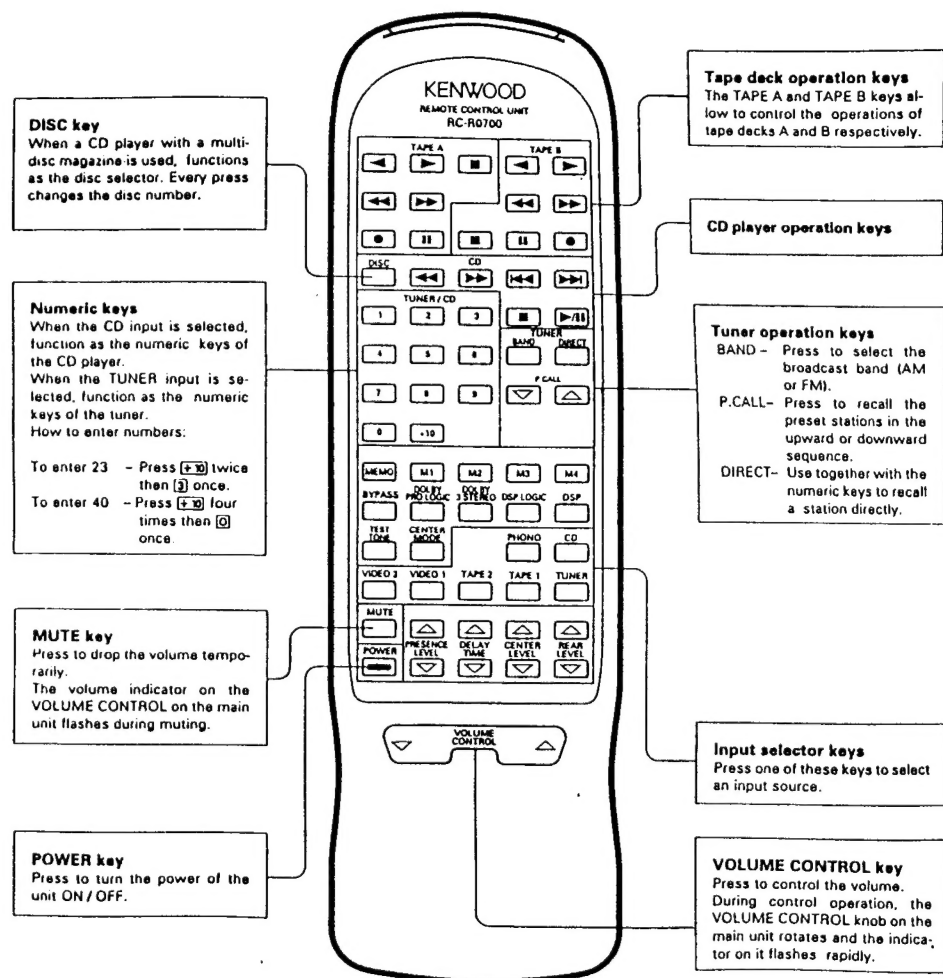


# Remote control unit: KR-V7050 (K, P, M, Y, X Type)

## Basic operation keys

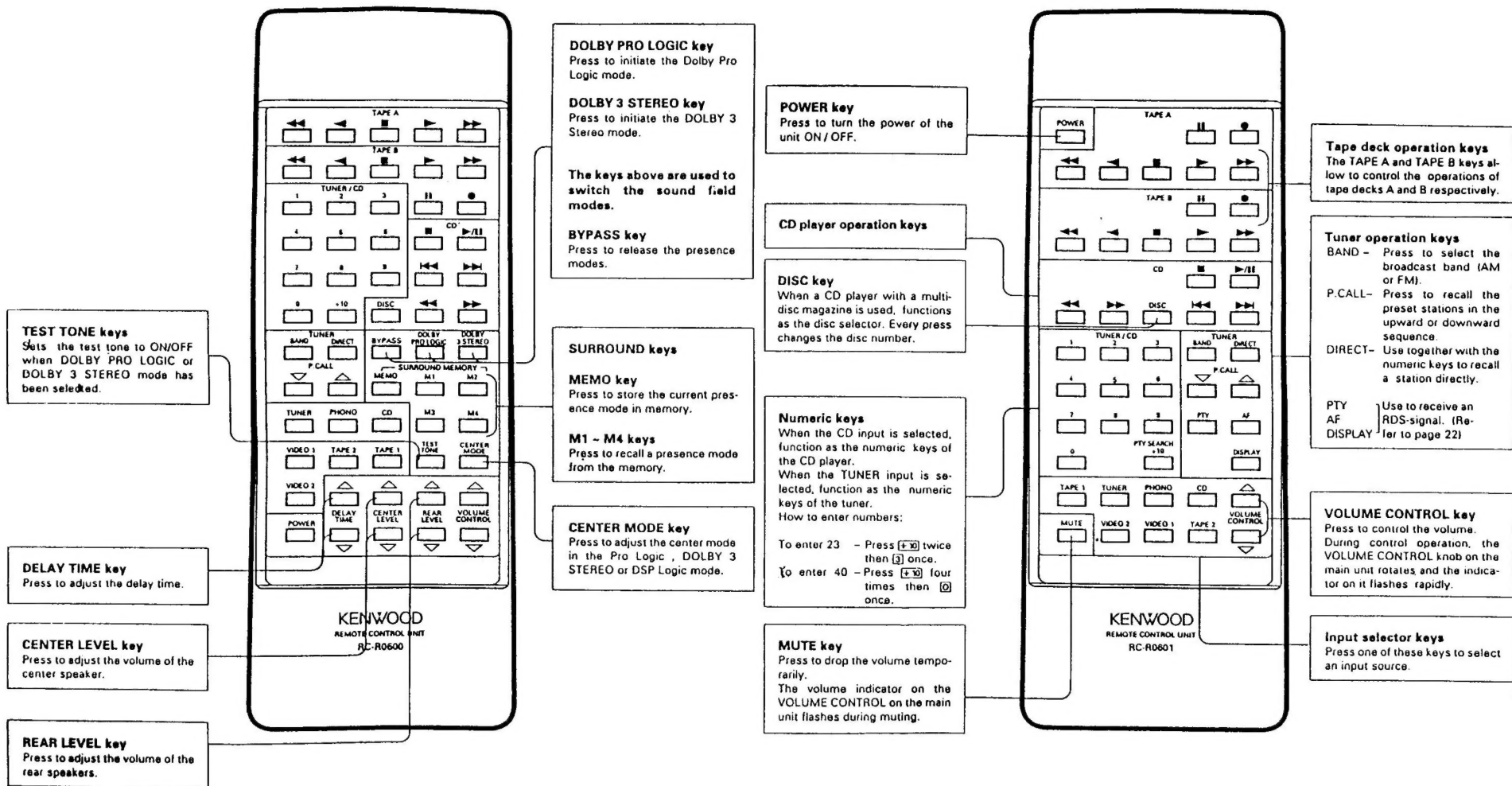
# Remote control unit: KR-V7050 (E, T Type)

## Basic operation keys



REMOTE CONTROL OPERATION

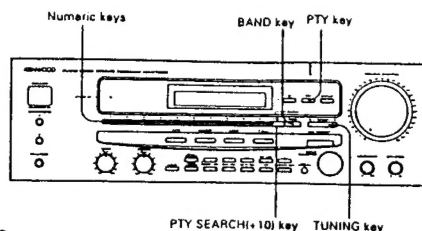
KR-V6050/7050



REMOTE CONTROL OPERATION

KR-V6050/7050

Refer to page 23 for a description of the RDS feature.

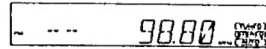
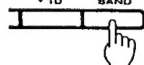


### ■ Searching for a desired program type

#### <PTY (Program Type Identification) Search>

By specifying the type of program (genre) you want to listen to, the tuner automatically searches for a station which is currently broadcasting a program of the specified type.

#### 1 Set the broadcast band to FM.

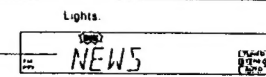


#### 2 Select the search mode.

Press the PTY key.



When an RDS broadcast is received, the program type is shown on the display. If no PTY data is available or if the station is not an RDS station, "NONE" is displayed.

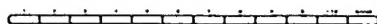


- Perform step 3 within 5 seconds after the program type is shown on the display.

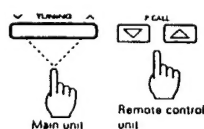
#### 3 Select the desired program type.

Select while "PTY" is lit.

(A) Use the numeric keys to directly select one of the ten program types numbered [1] to [0].



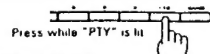
(B) Press the TUNING (P CALL) key to sequentially select from the fifteen available program types. Release the key when the desired program type is displayed.



DOWN	Program Type Name	Display
1	Pop Music	POP M
2	Rock Music	ROCK M
3	* M.O.R. Music	M.O.R. M
4	Light Classical	LIGHT M
5	Serious Classical	CLASSICS
6	Other Music	OTHER M
7	News	NEWS
8	Current Affairs	AFFAIRS
9	Information	INFO
0	Sport	SPORT
	Education	EDUCATE
	Drama	DRAMA
	Culture	CULTURE
	Science	SCIENCE
	Varied	VARIED
UP		

\* M.O.R. Music (Middle of the Road Music)

#### 4 Start the search.

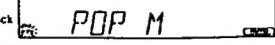


Display while the tuner is searching.

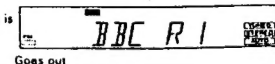
Program type name display

- No sound is heard while "PTY" is blinking.
- If a program of the desired type cannot be found, "NO PROG" is displayed, then after several seconds the display returns to the original display.
- If a program of the desired type is found, that program is received and the program type name display changes temporarily to the frequency display and then to the station name display.

When searching for a Rock Music broadcast.



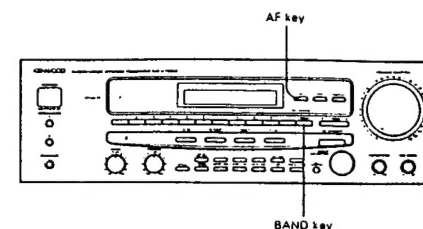
When a station is received.



To change to a different program type:

- Repeat steps 2 ~ 3

Refer to page 23 for a description of the RDS feature.

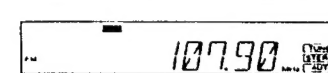
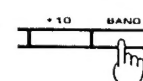


### ■ Searching for the best frequency

#### <AF (Alternative Frequencies) Search>

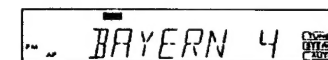
If more than one FM station is broadcasting the same program, this function will automatically select the station offering the strongest signal or the least interference. (The AF feature will not function if the [RDS] indicator is not lit.)

#### 1 Set the broadcast band to FM.



#### 2 Receive an RDS broadcast station.

Check that the indicator is lit.



- Tune in the desired station and verify that the [RDS] indicator lights.
- After a short time, the "AF" indicator lights. After verifying that the "AF" indicator is lit, proceed to the next step.

#### 3 Select the search mode.

Press the AF key



Display while the tune is searching.



blinks.

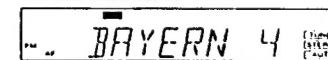
The frequency changes continuously.

When a station is received.



Goes out.

After about several seconds



Station name display

- Scanning (station searching) starts.
- No sound is heard while searching is being carried out.
- When a station is found, the "AF" indicator goes out.
- After several seconds, the station name is displayed.

#### AF (Alternative Frequencies) Feature

- With some stations, it may take some time for the "AF" indicator to light.
- To obtain the best reception conditions, we recommend waiting a few minutes after the "AF" indicator lights before pressing the [AF] key.
- It is useful to use the number keys to preset (memorize) stations received with this AF function. (See page 21)
- The selected frequency may vary depending on the signal conditions.
- There are some RDS stations which do not support this AF function. For such stations, the "AF" indicator does not light.

### RDS (Radio Data System) : E, T Typeonly

RDS is a system which transmits useful information (digital data) for FM broadcasts together with the broadcast signal. Tuners and receivers designed for RDS reception can extract the information from the broadcast signal for use with various functions such as automatic display of the station name.

#### This unit is equipped with the following functions utilizing RDS data:

(In some areas, some functions cannot be activated and some function names are differ as follows.)

#### PTY (Program Type Identification) Search: (See page 24)

The tuner automatically searches for a station which is currently broadcasting a specified program type (genre).

#### AF (Alternative Frequencies) Search: (See page 25)

When a weak signal is received, the tuner automatically searches for alternative frequencies broadcasting the same program and selects the best signal.

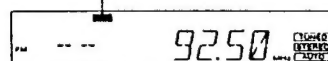
#### PS (Program Service Name) Display: (refer to the table below.)

When an RDS broadcast is received, the station name is automatically displayed.

#### CT (Clock Time) Display: (refer to the table below.)

Some RDS stations transmit clock data along with the broadcast signal. When the CT display is selected with the [DISPLAY] key, the hour and minute are displayed.

The [RDS] indicator lights when an RDS broadcast (signal) is received.



### DISPLAY key

Pressing the DISPLAY key changes the display contents. The display returns to the original display after about 5 seconds.

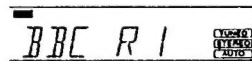


#### Display mode priority ranking

When an RDS broadcast is received: ① → ② → ③

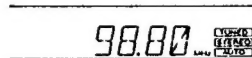
#### ① PS (Program Service Name) Display:

When an RDS broadcast is received, the station name is automatically displayed. If no PS data is transmitted, the display changes to the ② Frequency display.



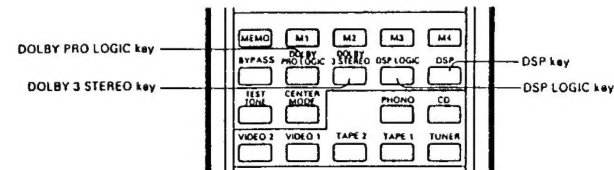
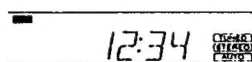
#### ② Frequency Display:

The frequency of the current station is displayed.



#### ③ CT (Clock Time) Display:

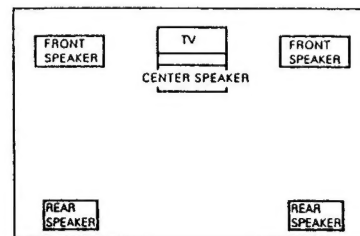
When an RDS broadcast is received, the hour and minute are shown on the display. If no clock data is available, the clock time is not displayed and the program service name is displayed.



[Example KR-V7050]

### Speaker positioning

#### Standard layout

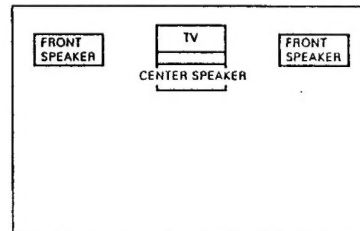


① **Dolby PRO LOGIC mode** [without KR-V6050 E type]  
Set the center mode according to the size of the center speaker.

**NORMAL** : When the center speaker size is small.  
**WIDE BAND** : When the center speaker size is large or medium.

② **DSP LOGIC mode** (KR-V7050 only)  
Set the center mode to "4 CH MODE" and select the desired presence mode.

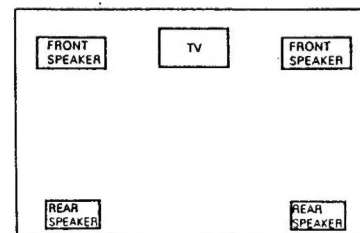
#### When no rear (surround) speakers are used



**Dolby 3 STEREO mode** [without KR-V6050 E type]  
Set the center mode according to the center speaker size.

**NORMAL** : when using a small center speaker.  
**WIDE BAND** : when using a medium-sized or larger center speaker.

#### When no center speaker is used



① **Dolby PRO LOGIC mode** [without KR-V6050 E type]  
Set the center mode to PHANTOM.

② **DSP mode** (KR-V7050 only)  
Select the desired presence mode.

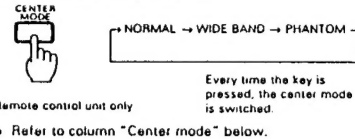
③ **DSP LOGIC mode** (KR-V7050 only)  
Set the center mode to "3 CH MODE" and select the desired presence mode.

### ■ Dolby PRO LOGIC field adjustment

#### 1 Set the Dolby PRO LOGIC mode.

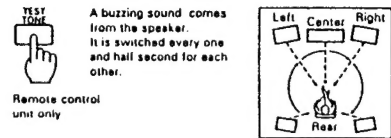


#### 2 Select the center mode.



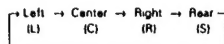
#### 3 Adjust the volume balance.

##### ① Press the TEST TONE key.

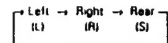


- Press at the listening position.

In NORMAL or WIDE BAND mode:



In PHANTOM mode:



#### ② Adjust the volume balance.

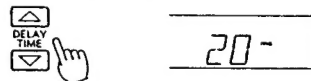


- Adjust so that the test tone volumes are the same on all speakers.
- The level being adjusted is displayed.
- The center level cannot be adjusted in the PHANTOM mode.

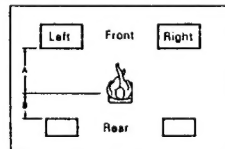
#### 4 Stop generating the test tone.



#### 5 Set the delay time.



- Calculate the proper delay time for Dolby Surround by referring to the illustration below.
- The delay time can be adjusted in the range from 16 to 29 ms.
- When the DELAY TIME key is pressed a delay time appears on the display. It varies every time the key is pressed.
- 16ms → 20ms ↔ 23ms ↔ 26ms ↔ 29ms
- Once a delay time is set, it is automatically held in memory so the same delay time is displayed whenever Dolby Surround is switched ON later.

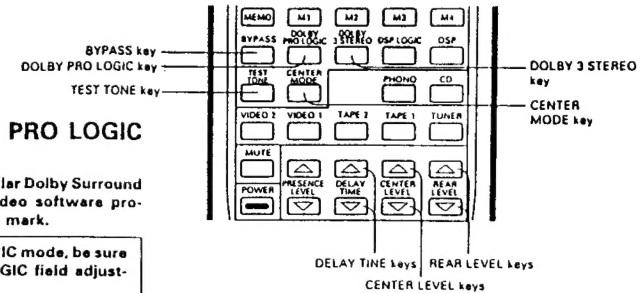
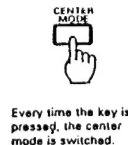


Delay time (ms) = 20 ms + 3 ms (A - B)  
A : Distance of front speaker (m)  
B : Distance of rear speaker (m)

#### Center mode

Select one of the following center modes according to the type of the presence speakers in your system.

- NORMAL** : Use this mode with a center speaker of a compact size.
- WIDE BAND** : Use this mode with a center speaker of a medium or larger size.
  - If you cannot identify whether your center speaker is of the medium or compact size, try both the NORMAL and WIDE BAND mode and use the one that can provide better sound positioning.
- PHANTOM** : Use this mode when the center speaker is not used.
  - Even without the center speaker, the signal is processed in a simulated manner to ensure proper center image positioning and provide the enjoyment of Dolby Surround.



### ■ Operation of Dolby PRO LOGIC playback

This function allows to enjoy a similar Dolby Surround effect to movie theaters from video software programs carrying the mark.

Before using the Dolby PRO LOGIC mode, be sure to perform the "Dolby PRO LOGIC field adjustment" procedure.

#### 1 Set the Dolby PRO LOGIC mode.



#### 2 Select the center mode.

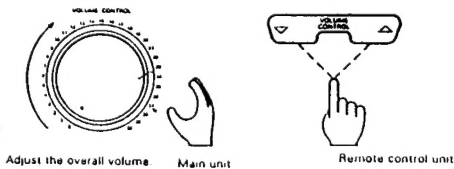


- Select the mode which has been set in step 2 of the "Dolby PRO LOGIC field adjustment" procedure. (Refer to page 26.)

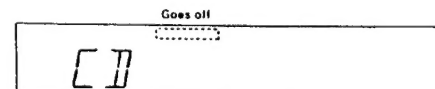
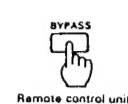
#### 3 Play a software program encoded with Dolby Surround.

#### 4 Adjust the volume and tone.

- When the level balance of center and rear speakers is not good, perform the "Dolby PRO LOGIC field adjustment" procedure again.



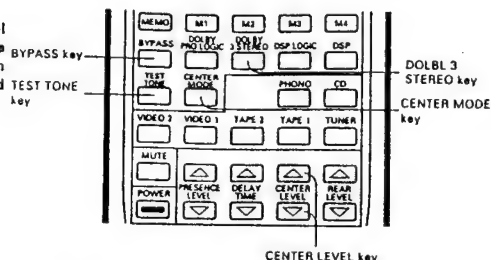
#### To return to normal stereo playback.





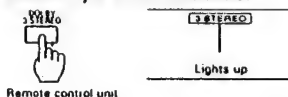
## Dolby 3 STEREO Mode

The Dolby 3 STEREO provides a active center channel to produce a better, stable center image. This mode can be used when listening to stereo video program and music or when surround listening or surround system set-up not possible.



### ■ Dolby 3 STEREO adjustment

#### 1 Set the Dolby 3 STEREO mode.



#### 2 Select the center mode.

Every time the key is pressed, the center mode is switched.

NORMAL ↔ WIDE BAND

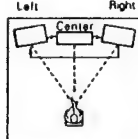
- Set the center mode to NORMAL if using a small center speaker, or set to WIDE BAND if using a medium-sized or larger speaker.

#### 3 Adjust the center speaker volume.

① Press the TEST TONE key.



A buzzing sound comes from the speaker. It is switched every one and half second for each other.



Remote control unit only

- Press at the listening position.
- When at 3 stereo sound is produced in the sequence: LEFT → CENTER → RIGHT (REAR not available with 3 stereo mode.)

② Adjust the volume.



- And adjust so that the level of the center speaker is equal to that of the left and right speakers.
- The rear level adjustment is invalid.

Remote control unit

#### 4 Stop generating the test tone.

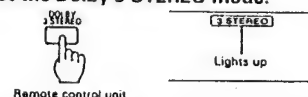
Press the key again.



Remote control unit only

### ■ Dolby 3 STEREO playback

#### 1 Set the Dolby 3 STEREO mode.



#### 2 Select the center mode.

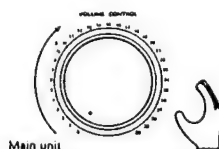
Every time the key is pressed, the center mode is switched.

NORMAL ↔ WIDE BAND

- Set the center mode to NORMAL if using a small center speaker, or set to WIDE BAND if using a medium-sized or larger speaker.

#### 3 Play a stereo software program or a Dolby surround program.

#### 4 Adjust the volume and tone.



Main unit

#### To return to normal stereo playback.



Remote control unit

GOES OFF

## DSP / DSP LOGIC Presence

The DSP (Digital Signal Processor) allows to reproduce the atmospheres of various sound fields. By applying additional adjustments, a custom presence effect of yourself can also be created.

- ① DSP presence modes ..... ARENA, JAZZ CLUB, STADIUM, DISCOTHEQUE
- ② DSP Logic presence modes ... LARGE THEATER, SMALL THEATER

Satisfactory effect can be enjoyed by selecting one of the presence modes by referring to the table below. Additionally, the parameters shown in the table can also be adjusted according to your liking.

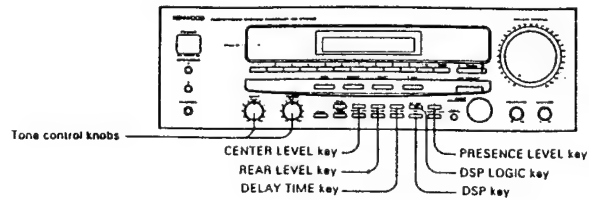
- Presence level : Variable in the range from - 20 to 0 dB.
- Delay time : Variable in the range from 3 to 50 ms.
- Rear level : Variable in the range from - 30 to + 10 dB.
- Center level : Variable in the range from - 30 to + 10 dB.

Presence mode	Initial setting values			Variable setting values	
	CHANNEL MODE	DELAY TIME	PRESENCE LEVEL	CENTER LEVEL	REAR LEVEL
ARENA	*	10 ms	- 12 dB	*	- 30 dB ~ + 10 dB
JAZZ CLUB	*	16 ms	- 12 dB	*	- 30 dB ~ + 10 dB
STADIUM	*	26 ms	- 8 dB	*	- 30 dB ~ + 10 dB
DISCOTHEQUE	*	16 ms	- 8 dB	*	- 30 dB ~ + 10 dB
LARGE THEATER	3ch	32 ms	- 8 dB	*	- 30 dB ~ + 10 dB
	4ch	32 ms	- 8 dB	- 30 dB ~ + 10 dB	- 30 dB ~ + 10 dB
SMALL THEATER	3ch	16 ms	- 16 dB	*	- 30 dB ~ + 10 dB
	4ch	16 ms	- 16 dB	- 30 dB ~ + 10 dB	- 30 dB ~ + 10 dB

- ARENA ..... A hall where high frequencies are reflected very well and reverberations are long.
- JAZZ CLUB ..... A live house of jazz where cymbals sounds well.
- STADIUM ..... A stadium with reflections proper to PA speakers.
- DISCOTHEQUE ..... A disco where medium-frequency range is enhanced by comfortable reverberations.
- LARGE THEATER ..... Reproduces a surround sound proper to a large movie theater.
- SMALL THEATER ..... Reproduces the sound field of a small movie theater or hall.

CONTROLS & INDICATORS

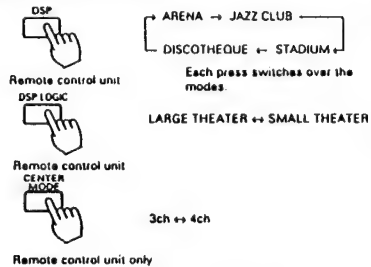
KR-V6050/7050



### ■ Creating a DSP sound field

#### 1 Select the presence mode.

Main unit or Remote control unit



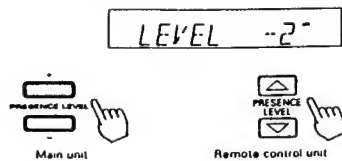
- Press the CENTER MODE key only in the DSP LOGIC mode.

#### 2 Play the music source.

Now, a sufficient sound field effect of the presence mode can be obtained. However, you can make additional adjustments as described in the following.

- Even when the following presence parameters have been adjusted, they will return to the initial settings when the Dolby Surround mode or another presence mode is selected.

#### 3 Adjust the presence level.



- Set in 2 dB steps within a range of -20 to 0 dB.

#### 4 Adjust the volume.

##### ① Adjust the center level.

- Set within a range of -30 to +10 dB



##### ② Adjust the rear level.

- Set within a range of -30 to +10 dB.



- Perform step ① only when the DSP LOGIC mode is set to "4 CH MODE".

#### 5 Adjust the sound quality. [Main unit only]



#### 6 Set the delay time.



- The delay time can be adjusted within a range of 3 ms to 50 ms.

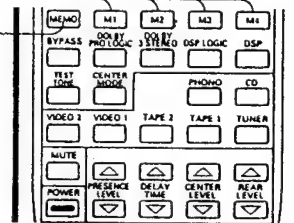
#### Surround information memory functions

For the enjoyment in Surround modes, it is required to set the levels of the channels, delay time, etc., as described on pages 29, 30, 31, 32, and 33. The Surround information memory function makes it possible to store such information in memory.

The Surround Information Memory function allows to store up to four sets of Surround information.

SURROUND M1-M4 keys

MEMO key



### ■ How to save Surround setup in memory [Remote control unit only]

#### 1 Select or create the surround setup to be saved.

- BYPASS cannot be stored.

#### 2 Press the MEMO key.

- Proceed to the step 3 while the display shown right is lighted.
- The unit enters storing stand by mode.



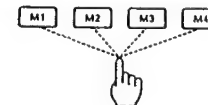
#### 3 Press the M1 ~ M4 key.



- Set to M1-M4.

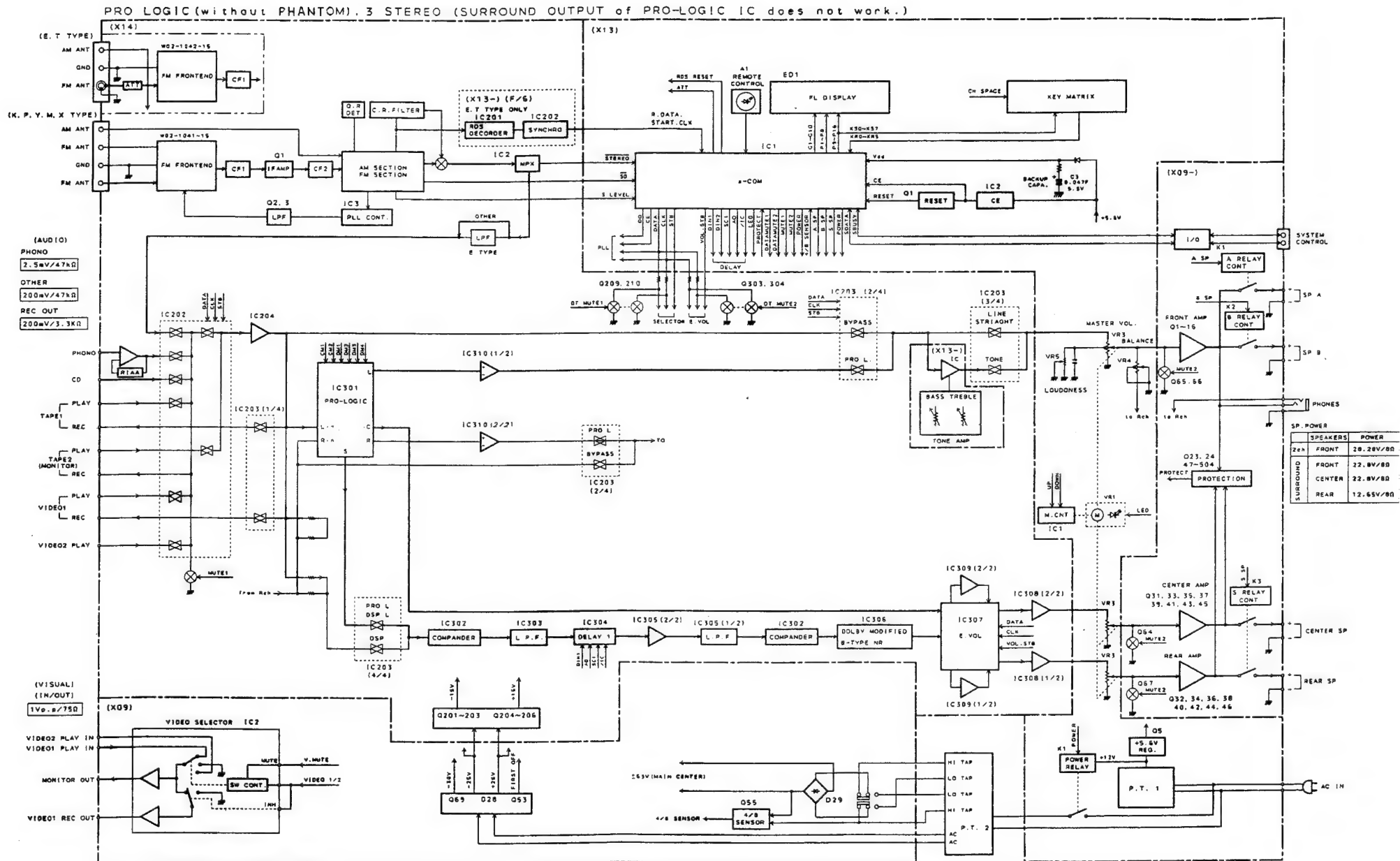
### ■ How to recall a Surround setup [Remote control unit only]

To recall a pattern from the Surround memory, Press one of the M1 to M4 keys to recall a pattern directly from the Surround memory.

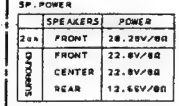


# KR-V6050/7050 KR-V6050/7050

## BLOCK DIAGRAM

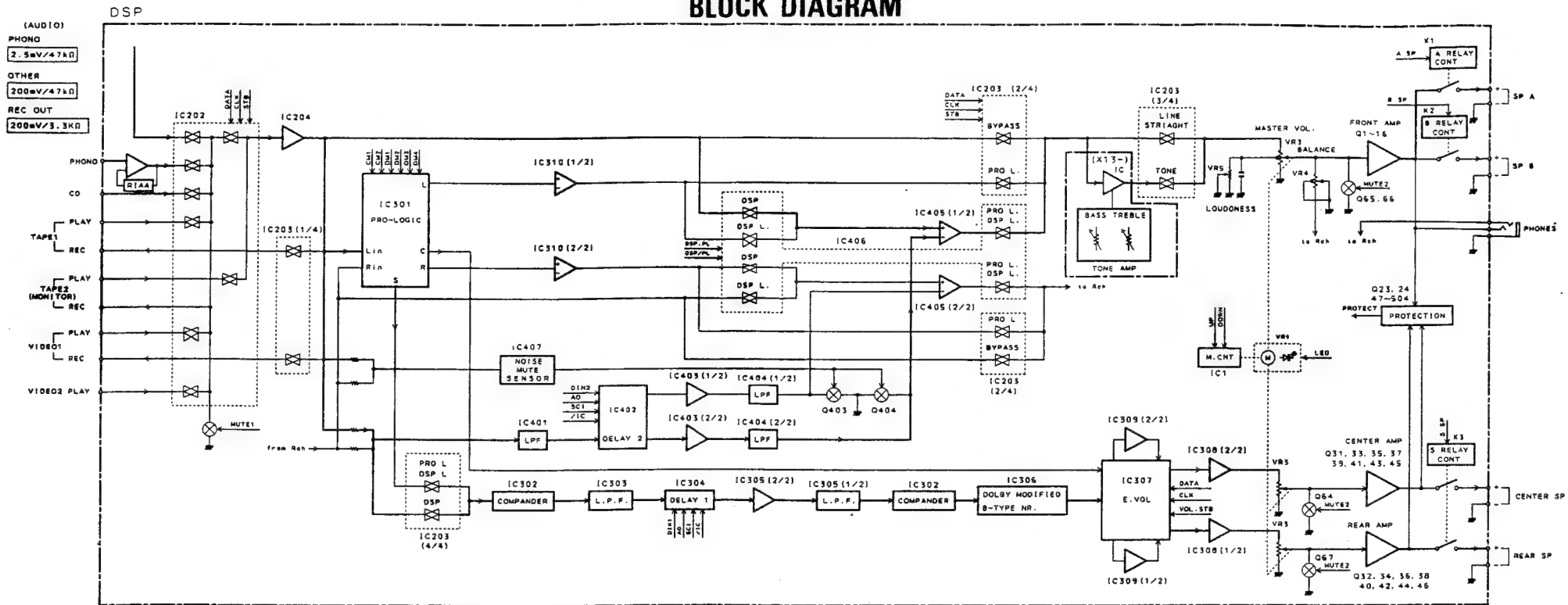


## BLOCK DIAGRAM

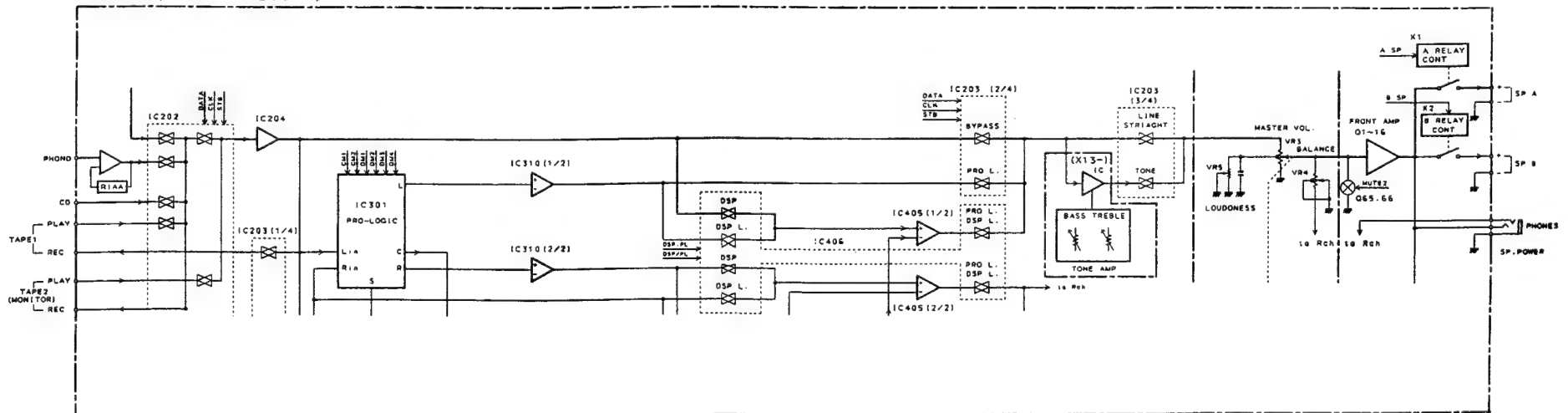


## KR-V6050/7050

### BLOCK DIAGRAM



BYPASS (LINE STRIGHT)



# KR-V6050/7050

## CIRCUIT DESCRIPTION

### 1. Function description

#### Features

##### AMP

Seven-position selector: (CD, TUNER, PHONO, TAPE1, TAPE2, VIDEO1, VIDEO2/LD)

Six audio input terminals: (CD, PHONO, TAPE1, TAPE2, VIDEO1, VIDEO2/LD)

Three audio output terminals: (TAPE1, TAPE2, VIDEO1)

Two video output terminals: (VIDEO1, VIDEO2/LD)

One video output terminal: (VIDEO1)

LINE STRAIGHT

SURROUND mode.

DSP [KR-V7050]

(ARENA, JAZZ CLUB, STADIUM DISCOTIQUE)

DSP-LOGIC [KR-V7050]

(3ch LARGE THEATER, 3ch SMALL THEATER, 4ch LARGE THEATER, 4ch SMALL THEATER)

PRO-LOGIC, [KR-V6050 (without E TYPE)/V7050]  
(NORMAL, WIDE, PHANTOM)

3-STEREO [KR-V6050 (without E TYPE)/V7050]  
(NORMAL, WIDE)

Speaker A/B changeover.

Surround memory (M1 to M4). [Without KR-V6050 E type]

(Surround mode, center mode, delay time, center level, rear level, presence level)

TAPE 2 monitor.

##### TUNER

20ch random preset..

Tuning control by IF count.

Direct selection.

RDS function (E, T-TYPE only).

### 2. Conditions according to the destination and model

#### AMP

MODEL	DIODE SW		Surround function
	5	4	
KR-V7050	0	0	PRO-LOGIC, 3-STEREO, DSP, DSP-LOGIC
KR-V6050 (except E)	0	1	PRO-LOGIC, 3-STEREO
KR-V6050 (E only)	1	X	No surround

X: Don't Care

#### TUNER

Destination	DIODE SW				Band	Receiving Remarks	Channel Space	IF	RF	Note
	3	2	1	0						
K1	0	0	0	0	FM	87.5 MHz ~ 108.0 MHz	100 kHz	+ 10.7 MHz	50 kHz	
					AM	530 kHz ~ 1610 kHz	10 kHz	+ 450 kHz	10 kHz	
K2	0	0	1	0	FM	87.5 MHz ~ 108.0 MHz	100 kHz	+ 10.7 MHz	50 kHz	
					AM	530 kHz ~ 1700 kHz	10 kHz	+ 450 kHz	10 kHz	
E	0	1	0	0	FM	87.5 MHz ~ 108.0 MHz	50 kHz	+ 10.7 MHz	50 kHz	
					AM	531 kHz ~ 1602 kHz	9 kHz	+ 450 kHz	9 kHz	
E	1	1	0	0	FM	87.5 MHz ~ 108.0 MHz	50 kHz	+ 10.7 MHz	50 kHz	With RDS
					AM	531 kHz ~ 1602 kHz	9 kHz	+ 450 kHz	9 kHz	

[DIODE MATRIX: <X14> DIODE SW NO.]

$\mu$ -com	PIN NO.	55	56	57	58	59	60
	PIN NO.	PIN NAME	KR5	KR4	KR3	KR2	KR1
61	KS7	Channel space	AM 1610/1700	RDS No/Yes	DSP. DOL/ DOL ONLY	SURROUND Yes/No	(X)
DUIDE SW NO.		2	1	3	4	5	0
<X13> DIODE Ref. No.		D32	D31	D33	D34	D35	—



# KR-V6050/7050

## CIRCUIT DESCRIPTION

- Diode SW 0 →
- Diode SW 1 → AM band range/K TYPE only
  - 0: AM NARROW
  - 1: AM WIDE
- Diode SW 2 → Channel base (Products bound for M: Changeover with switch)
  - 0: FM 100 kHz/step, AM 10 kHz/step
  - 1: FM 50 kHz/step, AM 9 kHz/step
- Diode SW 3 → With/without RDS/E TYPE only
  - 0: Without RDS
  - 1: With RDS
- Diode SW 4 → Surround mode
  - 0: DOLBY function & DSP function
  - 1: DOLBY function only
- Diode SW 5 → With/without surround
  - 0: With surround
  - 1: Without surround

### 3. Initial state

#### ① POWER OFF

#### ② AMP system

- Audio selector TUNER
- Video system selector VIDEO1
- Speaker A ON
- Speaker B OFF
- TAPE2 MONITOR OFF
- LINE STRAIGHT OFF

#### ③ TUNER system

- Band FM
- Frequency Lower limit of FM (87,5 MHz)
- TUNING mode AUTO TUNING (AUTO STEREO)
- P. CH indication --ch

#### ④ SURROUND system

- Mode BYPASS (OFF)
- CENTER LEVEL 0 dB
- REAR LEVEL 0 dB

#### ⑤ Test frequency

- PROLOGIC mode NORMAL
- 3STEREO mode NORMAL
- DSP mode ARENA
- DSPLOGIC mode SMALL THEATER
- DSPLOGIC channel mode 3ch
- PRESENCE LEVEL:
  - DOLBY PROLOGIC, 3STEREO - 20 dB
  - DSP ARENA, JAZZ - 12 dB
  - STADIUM, DISCO - 8 dB
  - DSPLOGIC SMALL THEATER - 16 dB
  - LARGE THEATER - 8 dB
- DELAY TIME:
  - DOLBY PROLOGIC 20 ms
  - DSP ARENA 10 ms
  - JAZZ 16 ms
  - STADIUM 26 ms
  - DISCO 16 ms
  - DSPLOGIC SMALL THEATER 16 ms
  - LARGE THEATER 32 ms

	K1 TYPE		K2 TYPE		E TYPE	
01ch	FM	98.00 MHz	FM	98.00 MHz	FM	98.00 MHz
02ch	FM	108.00 MHz	FM	108.00 MHz	FM	108.00 MHz
03ch	AM	630 kHz	AM	630 kHz	AM	630 kHz
04ch	AM	990 kHz	AM	990 kHz	AM	990 kHz
05ch	AM	1440 kHz	AM	1440 kHz	AM	1440 kHz
06ch	AM	1610 kHz	AM	1700 kHz	AM	1602 kHz
07ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
08ch	FM	98.50 MHz	FM	98.50 MHz	FM	98.50 MHz
09ch	AM	530 kHz	AM	530 kHz	AM	531 kHz
10ch	FM	89.10 MHz	FM	89.10 MHz	FM	89.10 MHz
11ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
12ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
13ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
14ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
15ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
16ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
17ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
18ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
19ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz
20ch	FM	87.50 MHz	FM	87.50 MHz	FM	87.50 MHz

# KR-V6050/7050

## CIRCUIT DESCRIPTION

### 4. Test mode

#### Main unit test mode

##### 1) Setting method

Turn the AC power ON while pushing the "TUNING DOWN" key.

##### 2) Cancellation method

Turn the AC power OFF.

##### 3) Contents

#### ① Start of the main unit test mode

The operation gets in the test mode through a main unit key, when the AC power is turned ON while pushing the "TUNING DOWN" key. Three operations are carried out in this case.

- Automatic power ON
- All fluorescent character display tubes and LED light up
- Initialization of all states except POWER ON/OFF  
The "all indications lit up" state is canceled by pushing any key of the main unit. The states changed during the test mode are initialized when the main unit test mode is canceled (AC power OFF).

#### ② Automatic motor VR UP/DOWN (AMP)

The (16-second UP → 16-second DOWN → Stop) operation of the motor VR is carried out when the "TAPE 2" key is operated.

Therefore, "TAPE 2 MONITOR" can not be changed over during the main unit test mode.

#### ③ MUTE signal output (AMP)

No control of selector MUTE (MUTE 1) is carried out.

#### ④ Test mode operation of 0~9, +10 (TUNER)

- When the +10 key is not operated, the channels 1 to 9 (keys 1 to 9), as well as the channel 10 (key 0) can be called.
- When the key +10 is operated once, the channels 11 to 19 (keys 1 to 9) as well as the channel 20 (key 0), can be called.
- When the +10 key is operated once again, the operation returns to the case "a) When the +10 key is not operated".

#### ⑤ Processing of keys available only in the remote controller

- Processing related to the AMP: None
- Processing related to the TUNER: None
- Processing related to the SURROUND (Depends on the SURROUND: MODE)  
"P. CH CALL" key: Works in the same way as the "CENTER MODE" key.  
"DIRECT" key: Works in the same way as the "TEST TONE" key.

Of course, the operations of "P. CH CALL" and "DIRECT" can not be carried out.

#### ⑥ Cancellation of the main unit test mode

The test mode is canceled, and the operation returns to the initial state when the AC power is turned OFF during the test mode.

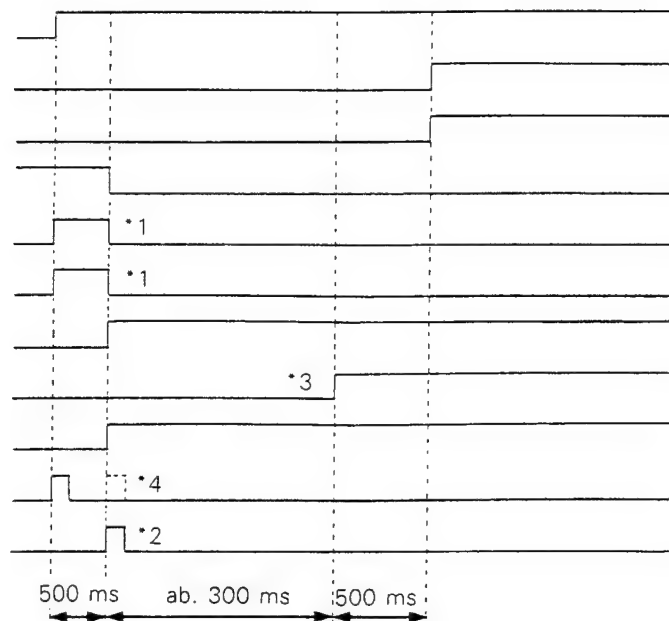
# KR-V6050/7050

## CIRCUIT DESCRIPTION

### Timing Chart

#### ① POWER ON

POWER (13)  
 /MUTE1 (53)  
 /MUTE2 (12)  
 VMUTE < × 14 > IC205 (22)  
  
 SEL IC (9, 10, 54)  
 Electrical VOL IC (9, 10, 46)  
 VIDEO SEL < × 14 > IC205 (21)  
 SPEAKER RELAY (14 ~ 16)  
 FL DRIVE (1 ~ 7, 61 ~ 80)  
 LED DRIVE (18)  
 Serial communication (41, 42)  
 PLL IC (9 ~ 11)



\*1. Output of data to the selector IC and the electronic VOL. IC is continued during the time t1 to prevent unstable state of the IC. Moreover, resistors are connected without fail in series with the control lines of the selector IC and the electronic volume IC.

\*2. This signal is outputted when the forcible MONO control signal of the TUNER is outputted from the port of the PLL IC (receiver).

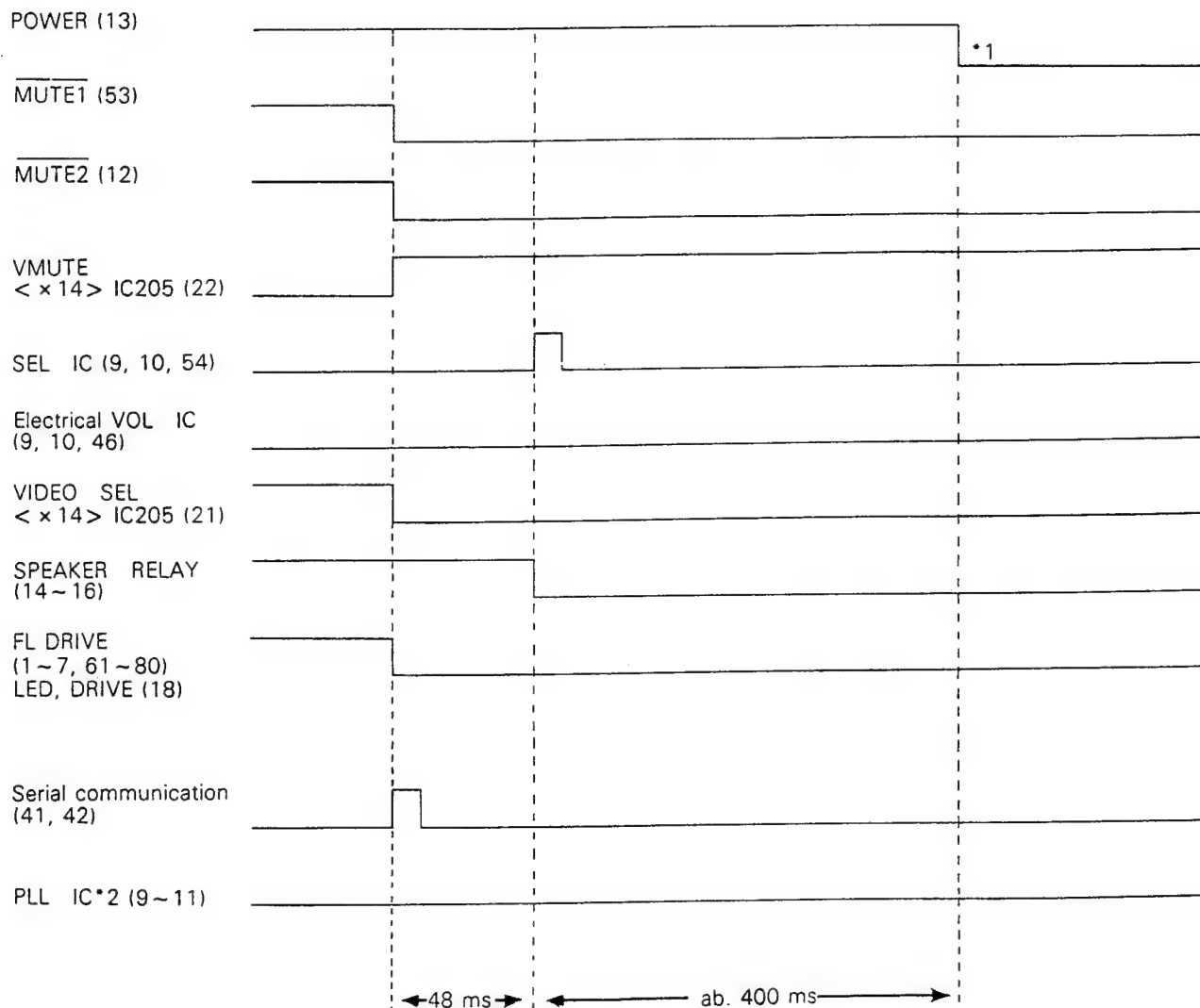
\*3. Protection detection is started immediately before connecting the SPEAKER RELAY.

\*4. The SYSTEM ON code is outputted after the time t1 in the case of single item as well as system component AMP. and RECEIVER.

# KR-V6050/7050

## CIRCUIT DESCRIPTION

### ② POWER OFF



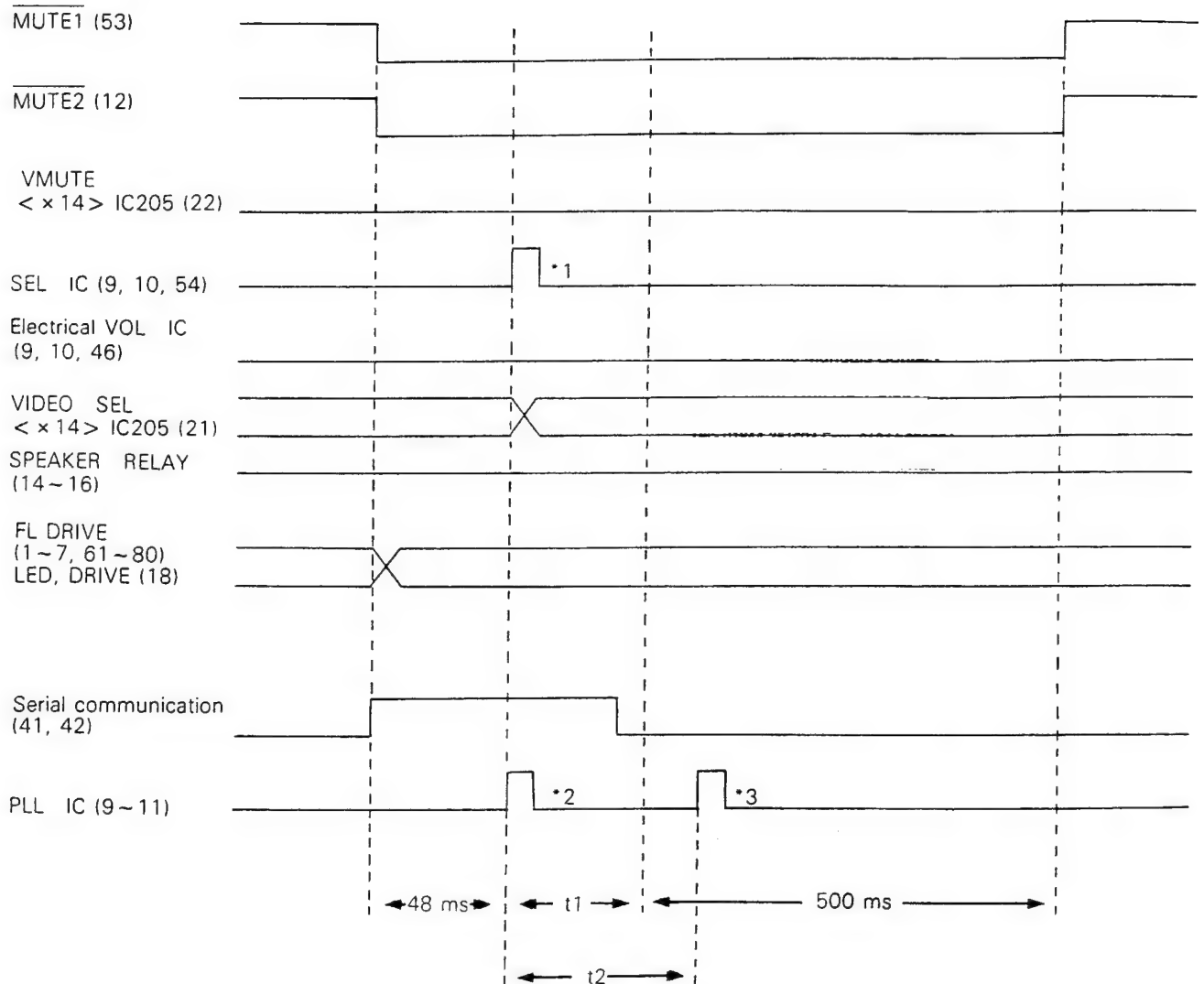
\*1. The disconnection of the AC OUTLET is delayed to drop the mechanism of the DECK connected to the AC OUTLET (SWITCHED).

\*2. This signal is outputted in the case of receiver.

# KR-V6050/7050

## CIRCUIT DESCRIPTION

### ③ Selector changeover



t1: Data transmission time to the selector IC, DSP IC, etc.

t2: 80 ms (+ 80 ms) IF COUNT time

\*1. Pay special attention to the oscillation when switching. In particular, before switching the input selector, make sure of opening the REC OUT SW once.

Since data before changeover are left in the RAM for DELAY when the surround is composed by using DSP IC and the like, data of the current surround mode are sent once again to the DSP IC and the like after clearing the RAM for DELAY.

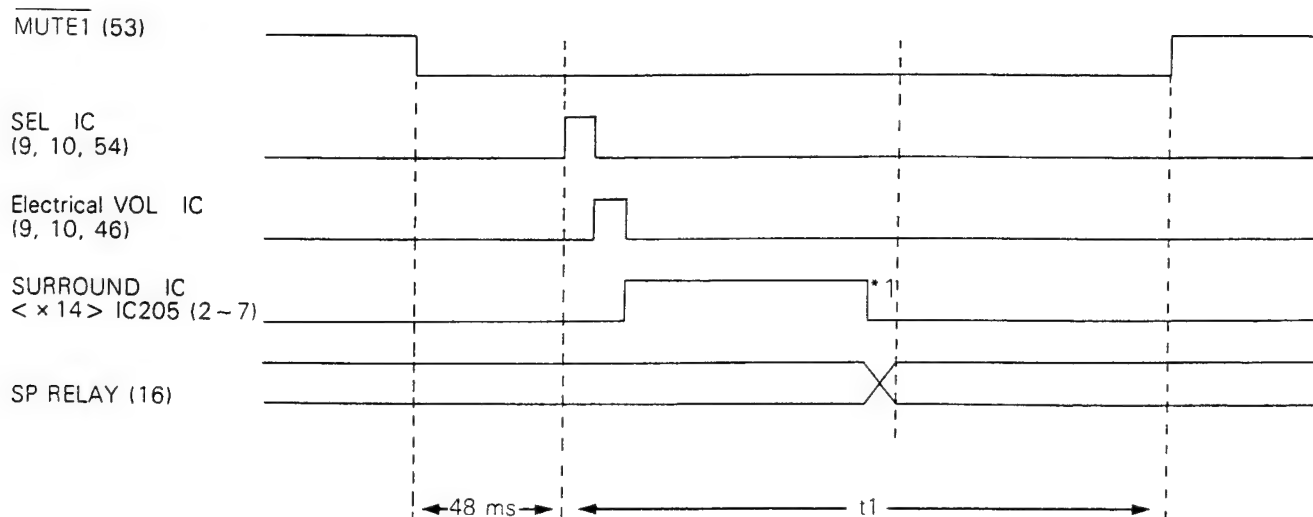
\*2. Receivers without TUNER MUTE set the lower frequency limit of AM in the PLL IC, except when the selector is set to TUNER.

\*3. The IF count completion data is set with this timing when IF count is being carried out.

# KR-V6050/7050

## CIRCUIT DESCRIPTION

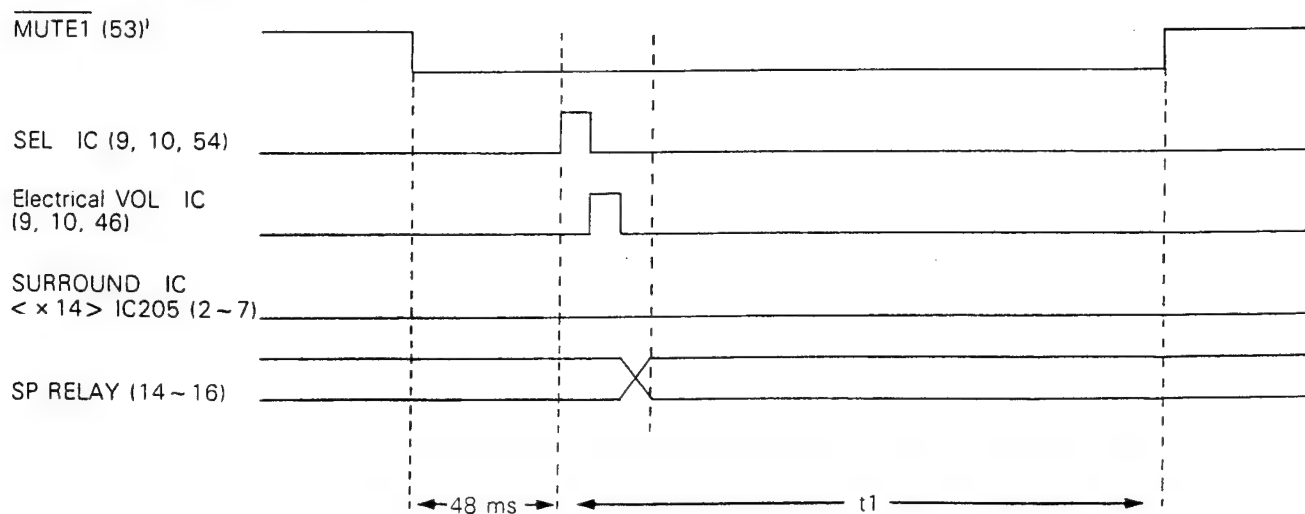
### ⑦ SURROUND ON and SURROUND MODE switching CENTER MODE switching



$t_1$ : 1000 ms (Including time for transmission of data do selector IC, electronic VOL IC and SURROUND IC).

\*1: Since data before changeover are left in the RAM for DELAY when the surround is composed by using DSP IC and the like, data of the current surround mode are sent once again to the DSP IC and the like after clearing the RAM for DELAY

### ⑧ SURROUND OFF (BYPASS)



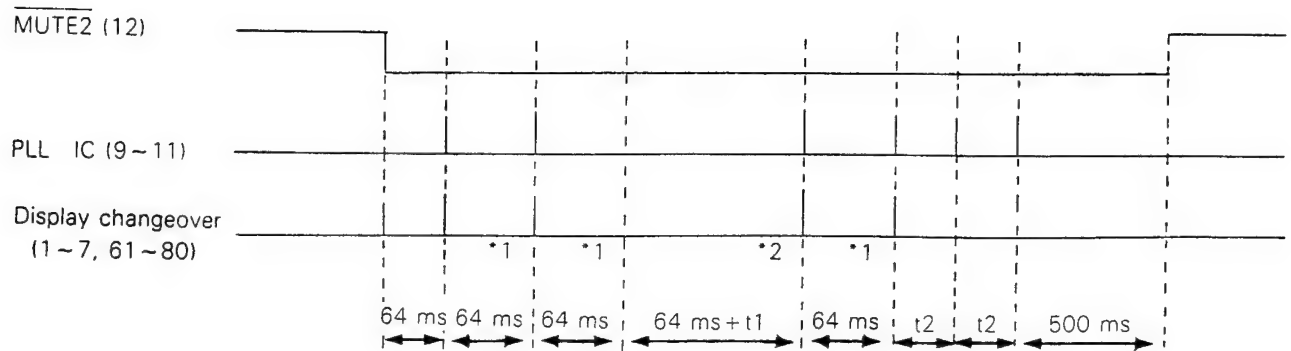
$t_1$ : 1000 ms (Including time for transmission of data do selector IC and electronic VOL IC).



# KR-V6050/7050

## CIRCUIT DESCRIPTION

### ⑰ AF SEARCH



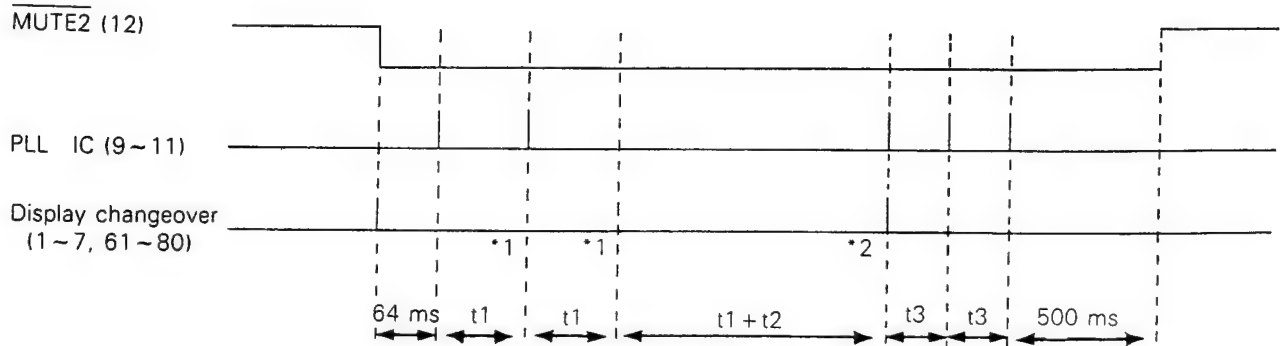
t1: 560 ms (RDS CHECK)

t2: 80 ms (Once or twice/IF count time)

\*1: When SD = High (Without station)

\*2: When SD = Low (With station)

### ⑱ PTY SEARCH



t1: 32 ms (BAND EDGE = 64 ms)

t2: 480 ms + 240 ms (RDS CHECK)

t3: 80 ms (Once or twice/IF count time)

\*1: When SD = High (Without station)

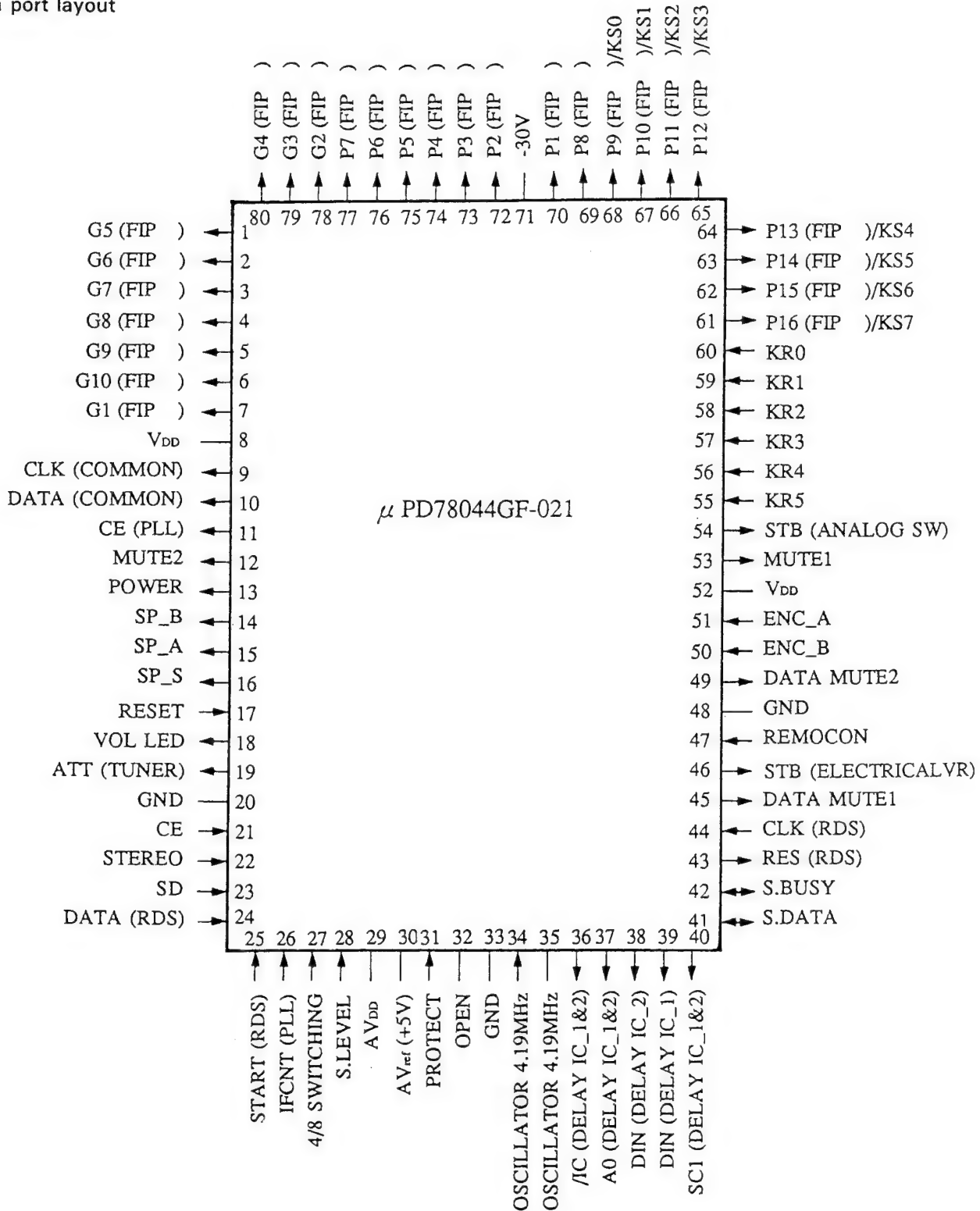
\*2: When SD = Low (With station)

# KR-V6050/7050

## CIRCUIT DESCRIPTION

Microprocessor:  $\mu$ PD78044GF-021 (X13: IC1)

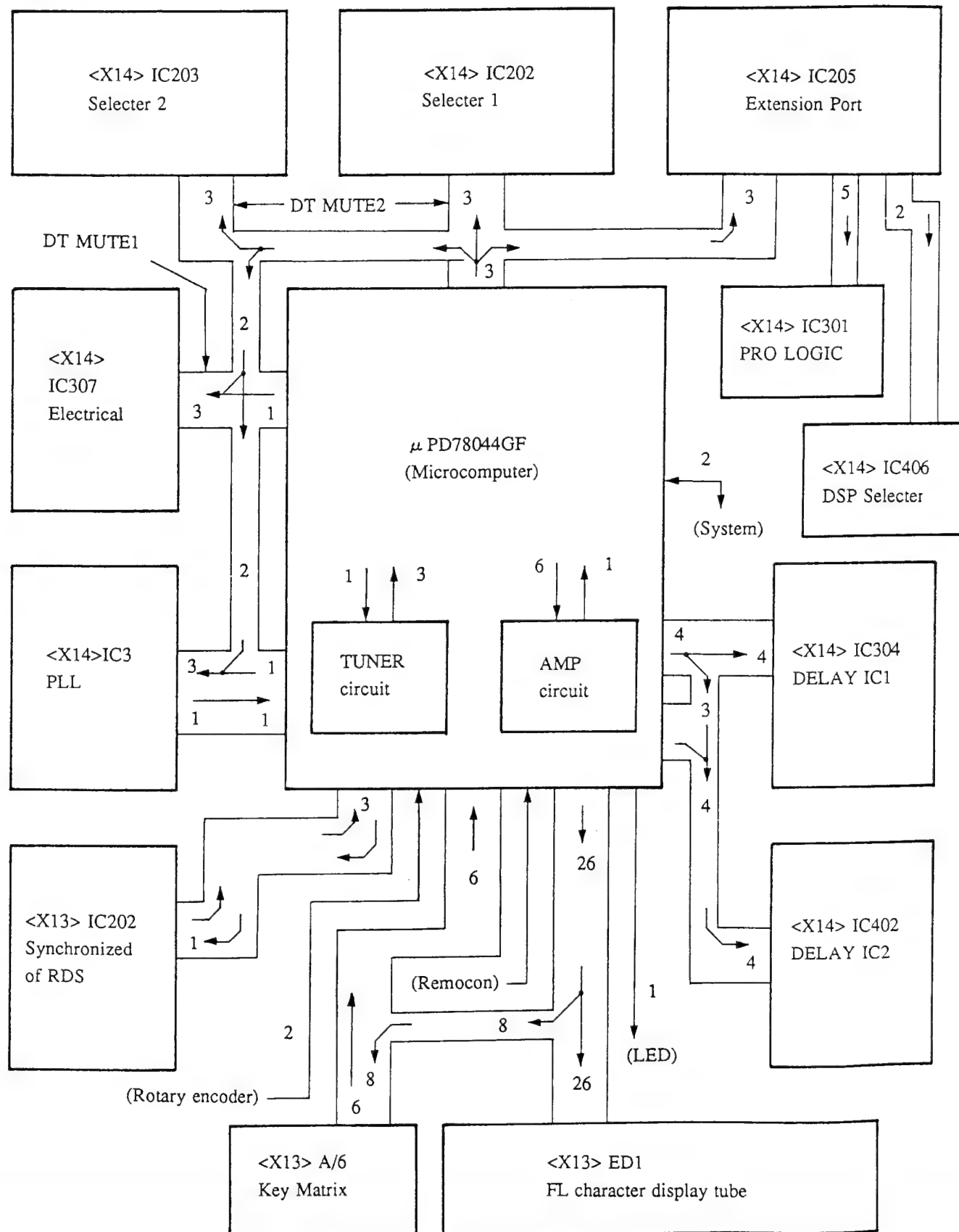
$\mu$ Com port layout



# KR-V6050/7050

## CIRCUIT DESCRIPTION

Microprocessor periphery block Diagram



# KR-V6050/7050

## CIRCUIT DESCRIPTION

### Pin description

Pin Number	Port I/O	Name	Description
1	OUT	G5	FL grid 5
2	OUT	G6	FL grid 6
3	OUT	G7	FL grid 7
4	OUT	G8	FL grid 8
5	OUT	G9	FL grid 9
6	OUT	G10	FL grid 10
7	OUT	G1	FL grid 1
8	—	V <sub>DD</sub>	Microprocessor power supply
9	OUT	CLK (COMMON)	Clock for control IC (ANALOG SW/PLL IC/Electronic VOL)
10	OUT	DATA (COMMON)	Data for control IC (ANALOG SW/PLL IC/Electronic VOL)
11	OUT	CE (PLL)	PLL CE
12	OUT	MUTE2	Amplifier MUTE control H: MUTE OFF L: MUTE ON
13	OUT	POWER	Power relay control H: POWER ON L: POWER OFF
14	OUT	SP__B	Speaker B relay control H: SP__B ON L: SP__B OFF
15	OUT	SP__A	Speaker A relay control H: SP__A ON L: SP__A OFF
16	OUT	SP__S	Surround speaker relay control H: SP__S ON L: SP__S OFF
17	IN	RESET	Microprocessor reset
18	OUT	VOL LED	VOLUME LED control H: LED OFF L: LED ON
19	OUT	ATT (TUNER)	Attenuator control H: ATT ON L: ATT OFF
20	—	GND	A/D power supply
21	IN	CE	Microprocessor CE
22	IN	STEREO	Stereo signal detection H: MONAURAL L: STEREO
23	IN	SD	Tuning signal detection H: NOT TUNED L: TUNED
24	IN	DATA (RDS)	RDS data
25	IN	START (RDS)	RDS start bit
26	IN	IFCNT (PLL)	IF CNT data (PLL DO)
27	IN	4/8 Changeover	Speaker impedance switching H: 4 $\Omega$ L: 8 $\Omega$
28	IN	S. LEVEL	SIGNAL level (A/D)
29	—	AV <sub>DD</sub>	A/D power supply
30	—	AV <sub>ref</sub>	A/D reference voltage (+ 5 V)
31	IN	PROTECTION	Protection detection H: PROTECTION L: NORMAL
32	—	OPEN	
33	—	V <sub>SS</sub> (GND)	Microprocessor power supply
34	IN	X1	4.19 MHz oscillator
35	OUT	X2	4.19 MHz oscillator
36	OUT	/IC (DELAY1 & 2)	DELAY IC 1 & 2 initial clearing
37	OUT	A0 (DELAY 1 & 2)	DELAY IC 1 & 2 address/data
38	OUT	DIN (DELAY 1)	DELAY IC 1 data
39	OUT	DIN (DELAY 2)	DELAY IC 2 data
40	OUT	SC1 (DEALY 1 & 2)	DELAY IC 1 & 2 clock

# KR-V6050/7050

## CIRCUIT DESCRIPTION

Pin Number	Port I/O	Name	Description
41	I/O	S. DATA	8 bit system DATA
42	I/O	S. BUSY	8 bit system BUSY
43	OUT	RESET (RDS)	RDS reset
44	IN	CLK (RDS)	RDS clock
45	OUT	DT MUTE 1	Data MUTE 1 H: DATA MUTE ON L: DATA MUTE OFF
46	OUT	STB (Electrical VOL)	Electronic VOL STB
47	IN	REMOCON	Remote controller input
48	—	GND	
49	OUT	DT MUTE 2	Data MUTE 2 H: DATA MUTE ON L: DATA MUTE OFF
50	IN	ENC__B	Encoder input B
51	IN	ENC__A	Encoder input A
52	—	V <sub>DD</sub>	Microprocessor power supply
53	OUT	MUTE 1	Selector MUTE control H: MUTE OFF L: MUTE ON
54	OUT	STB (ANALOG SW)	Analog SW STB
55	IN	KR5	Key return 5
56	IN	KR4	Key return 4
57	IN	KR3	Key return 3
58	IN	KR2	Key return 2
59	IN	KR1	Key return 1
60	IN	KR0	Key return 0
61	OUT	P16/KS7	FL segment 16/Key scan 7
62	OUT	P15/KS6	FL segment 15/Key scan 6
63	OUT	P14/KS5	FL segment 14/Key scan 5
64	OUT	P13/KS4	FL segment 13/Key scan 4
65	OUT	P12/KS3	FL segment 12/Key scan 3
66	OUT	P11/KS2	FL segment 11/Key scan 2
67	OUT	P10/KS1	FL segment 10/Key scan 1
68	OUT	P9/KS0	FL segment 9/Key scan 0
69	OUT	P8	FL segment 8
70	OUT	P1	FL segment 1
71	—	-30 V (Vload)	FL drive power supply
72	OUT	P2	FL segment 2
73	OUT	P3	FL segment 3
74	OUT	P4	FL segment 4
75	OUT	P5	FL segment 5
76	OUT	P6	FL segment 6
77	OUT	P7	FL segment 7
78	OUT	G2	FL grid 2
79	OUT	G3	FL grid 3
80	OUT	G4	FL grid 4

## CIRCUIT DESCRIPTION

### RDS product operation (KR-V6050/7050: E, T type)

#### 1. Outline of RDS

RDS (RADIO DATA SYSTEM) is a new FM broadcasting feature which is being carried out in the 87.5—108.0 MHz FM broadcasting frequency band. RDS consists of broadcasting digital signals on the sub-carrier (57 kHz) of the FM signal, and the digital signal is on the upper part of the MAIN and SUB (STEREO) carriers of the ordinary FM broadcasting. Therefore, it exerts no influence on the sound of the FM broadcasting. Since RDS broadcasting has the major purpose of providing service covering movable receivers, its functions extend over a wide range, but it does not have so much applications related to ordinary audio tuners for home use.

RDS broadcasting was originated in Europe, and as things now stand it is not available in other areas.

#### 2. Basic functions of RDS

As things now stand, 14 basic functions of RDS have been made public, and there is possibility of addition of new functions in the future. The 14 functions are listed in the followings.

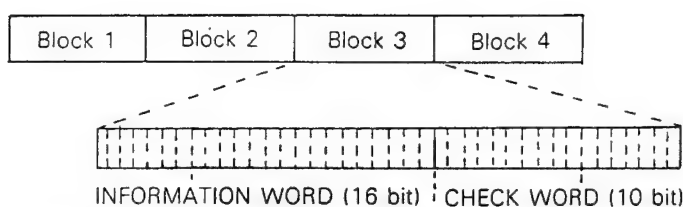
- ① PI (Program Identification)
- ② PS (Program Service)
- ③ PTY (Program Type)
- ④ TP (Identification of Traffic Program)
- ⑤ AF (Alternative Frequency List)
- ⑥ TA (Identification of Traffic Announcement)
- ⑦ DI (Decoder Identification)
- ⑧ M/S (Music/Speech Switch)
- ⑨ PIN (Program Item)
- ⑩ RT (Character Broadcasting)
- ⑪ EON (Information on Other Networks)
- ⑫ TDC (Transparent Data Channel)
- ⑬ IH (In House Application)
- ⑭ CT (Clock Time and Date)

It is presumed that most of these functions target movable receivers.

The receivers announced this time (KR-V6050/V7050) use five functions, ①, ②, ③, ⑤ and ⑭.

#### 3. RDS data format

RDS data are transmitted continuously in by arranging them in units (groups) of 104 bits. Each 104-bit data unit (group) consists of 4 blocks, and each block consists of 26 bits of data. Each 26-bit data block consists of 16-bit information word and 10-bit check word. The construction of the data group and data blocks are shown below.



Since the 10-bit check word is the data for error detection, its detailed description is omitted. The 16-bit information word is the data to realize the RDS functions.

##### ① Block 1

This 16-bit data represents the PI code. In all groups, block 1 is the PI (identification) code of the broadcasting station carrying out RDS broadcasting.

##### ② Block 2

This 16-bit data contains information of various kinds. The most basic information is the group type code (4-bit), and indicates the type of the group which the block in question is contained in. Moreover, there is also the Bo code (1 bit) which indicates the version of the group. The type of the group becomes clear from this 5-bit data. Thus, there are basically 32 types of groups consisting of XA and XB ( $X = 0$  to 15). Block 2 of all groups contains this code.

Another basic data is the TP data (1 bit) and the PTY data (5 bit), where TP is the traffic program identification code and PTY is the type code of the broadcasting program. Also these data are contained in Block 2 of all groups.

The remaining 5 bits have different uses, depending on the group type code.

##### ③ Block 3

Block 3 has different uses, depending on the group type code. It must be remembered, however, that the same contents as Block 1 (PI code) are sent in the case of group type XB ( $X = 0$  to 15).



# KR-V6050/7050

## CIRCUIT DESCRIPTION

### ④ Block 4

Block 4 has different uses, depending on the group type code.

As can be seen, the use of the last 5 bits of Block 2 and the use of data of Block 3 and Block 4 depends of the group type data of the first 5 bits of Block 2.

### 4. Description of the functions of RDS

Only the following RDS functions used in the receivers KR-V6050/7050 (hereinafter KR-V) featuring RDS.

1. PI (Program Identification)
2. PS (Program Service)
3. PTY (Program Type)
4. AF (List of Alternative Frequencies)
5. CT (Clock time and Date)

#### 4-1. PI (Program Identification) function

As mentioned previously in "3. RDS Data Format", PI code is contained in all groups, and therefore data determination does not take so much time.

The PI code is an important data because it is the broadcasting station identification code, but the PI code itself does not realize any function. This time the PI code is used to determine the synchronization of RDS and to check the coincidence of the broadcasting station during AF search (described later on).

#### 4-2. PS (Program Service) function

In the case of Groups Type OA and Type OB, PS data consists of the last 2 bits of Block 2 and the totality of Block 4 (2 bytes). Since PS data has (8-column × 1 BYTE) composition, it is necessary to read at least 4 times from OA to OB until reading all columns, and the determination of data requires relatively long time. Moreover, the indication requires some time to change over, because it changes over after the entry of all columns and the determination of the data.

The PS function indicates the broadcasting station name, and the indication mode is switched to the PS indication mode when RDS broadcasting is received and the PS indication mode when RDS broadcasting is received and the PS data is determined.

The indication mode has the following order of priority:

- ① PS indication
- ② SNPS indication
- ③ Frequency indication

PS indication appears on the display when the PS data is determined, the SNPS indication appears on the display when there is no PS and there is SNPS data, and the frequency is indicated when there is no PS nor SNPS. This time the DISPLAY key is not used to switch the indication mode, and is used to confirm the contents indicated on the display in each case, instead. The PS indication, the SNPS indication, the frequency indication and the CT indication are switched cyclically, but the display returns to the original state after 5 seconds. When there is no PS data, there is no PS indication on the display even when PS indication is requested by the DISPLAY key (the display does not get in the PS indication mode).

As mentioned above, the determination of the PS data requires some time, and therefore it is impossible to carry out PS indication immediately after changing the frequency. Such being the case, frequency indication is carried out during 3 seconds after changing the frequency.

#### 4-3. PTY (Program Type) function

Since PTY data is contained in all groups, in the same way as PI data, it does not take so much time for data determination. Basically, time required for data determination is the same as in the case of PI or slightly longer.

PTY is the function which identifies the type of program being broadcasted, and consists of 5-bit data. Therefore, it is possible to have 32 types, but as things now stand only 17 types have been defined (Refer to the attached sheets). This data can be used to carry out the "PTY search", which consists of searching for the broadcast the user wants to listen to.

PTY search requires a series of operations, that consist of getting in the PTY selection mode by means of the PTY key, selecting the desired PTY by means of the UP/DOWN key and the ten keys (0 to 9), and starting the search by means of the +10 key. The mode is canceled when no key is operated within 5 seconds.

The search operation increases the frequency in steps of 100 kHz, and stops at the broadcasting station which coincides with the selected PTY. If the selected PTY is not found even when the frequency scans through the whole broadcasting band, the search operation is finished. The "NO PROG" indication is displayed for 5 seconds when the broadcasting station of the type being searched is not found.

# KR-V6050/7050

## CIRCUIT DESCRIPTION

If RDS broadcasting is being received when the PTY key is pushed in the first place, the current PTY is displayed, and the selection processing is carried out at that point. PTY search can be carried out even when the station being received is not broadcasting RDS (even when no station is being received). In this case the first PTY indication is "NONE" (same as PTY = 0).

### 4-4 AF (Alternative Frequency List) function

AF data consist of 2-byte data of Block 3 in the case of group type OA. Since each AF data consists of 1 byte 2 AF data are transmitted each time.

AF data refer to the alternative frequency of the station which is being broadcasted. If the AF list is prepared by gathering these data, it becomes possible to search and find another station with receiving conditions that are better than the current ones from that list, when the receiving conditions of the station which is being received becomes bad. This is the concept of "AF search".

AF search is the function to find, from the existing AF list, another broadcasting station which has receiving conditions that are better than the current ones. If the broadcasting station which is being received is an RDS broadcasting station (station carrying out RDS broadcasting), search is started when the AF key is pushed. No search is carried out, however, when there is no AF list.

In the search operation the current frequency, PI code, S (signal) level, and N (noise) level are stored in the first place as best data, and then the frequency data of the AF list are scanned. When a station is found the PI code is checked for coincidence, and if the PI coincides the receiving states (S-level, N-level) are compared. The best receiving conditions are regarded as the best data, and the best values (No. 1) and better values (No. 2) are fetched. Search operation is carried out up to the last station of the AF list, and when the whole AF list is searched, the best receiving station is determined out of the surviving best data and better data. Details are shown in the attached flowchart.

There are 2 methods to transmit the AF data, and they are called "Method A" and "Method B". They have minor differences in the order of transmission of alternative frequency data. In "Method A" alternative frequency data of a maximum of 25 stations are transmitted in succession. In "Method B" either of the pair of alternative frequencies (2 frequencies) being transmitted contains the same data as the pair transmitted next. In "Method B" the transmitted data have the following meanings, depending on how they are transmitted.

(PATTERN 1): The TUNING frequency is the data composing the pair, and we have  $f1 < f2$ .

f1	f2	
88.1 MHz	90.0 MHz	(90.0 MHz is being received)
90.0 MHz	101.0 MHz	

In this case both 88.1 MHz and 101.0 MHz stations have the same PI, and these data are fetched in the AF list. Therefore, these frequencies are submitted to AF search.

(PATTERN 2): The TUNING frequency is the data composing the pair, and we have  $f1 > f2$ .

f1	f2	
91.0 MHz	89.0 MHz	(91.0 MHz is being received)
93.7 MHz	91.0 MHz	

In this case the 89.0 MHz and 93.7 MHz stations have different PI (local broadcasting), and these data are not fetched in the AF list. Therefore, these frequencies are not submitted to AF search.

(PATTERN 3): The TUNING frequency is not the data composing the pair.

f1	f2	
93.4 MHz	91.0 MHz	(91.0 MHz is being received)
100.7 MHz	93.4 MHz	

Since in this case the main station (91.0 MHz) outputs the AF list for the 93.4 MHz substation, this AF list is not the AF (alternative frequency) of the station that is being received. It is the data for the substation without RDS broadcasting facilities. Therefore, no AF search is carried out with these frequencies.

# KR-V6050/7050

## CIRCUIT DESCRIPTION

### 4-5. CT (clock time and date) functions

The CT (clock) function transmits the current year/month/day as well as minute/second as RDS data.

The feature being used this time decodes only the hour and minute. CT data are transmitted once every minute. Therefore, misreading of a code may result into serious misindication on the display. As a countermeasure to cope with that problem, clock count is carried out inside the microcomputer concurrently with the fetching of the CT data. When CT data is not received for 5 minutes or one, clock count is stopped.

When CT data is entered correctly 3 successive times, clock count is started inside the microprocessor and indication of the clock on the display becomes possible. After

that, the clock counter inside the microprocessor is corrected when CT data is received, and the clock counter inside the microcomputer is advanced by 1 minute when no CT data is received after the passage of 1 minute. Since ceramic clock is used instead of crystal oscillator in the receiver microprocessor being used this time, there is possibility of error of a few seconds when it is counted during 5 minutes with no correction. Therefore, when no CT data is received for 5 minutes, the clock data is cleared and the clock count by the microprocessor is stopped.

The clock indication is changed over by means of the DISPLAY key, but the indication returns to the original state after 5 seconds. There is no CT indication when there is no clock data and when no RDS broadcasting is being received.

## APPENDIX

### PTY Data Table

No.	PTY Code	Programme Type	PTY Display	Ten Key	UP/DOWN
0	00	No programme type or undefined	NONE	—	—
1	10	Pop music	POP M	1	○
2	11	Rock music	ROCK M	2	○
3	12	M.O.R. music	M.O.R. M	3	○
4	13	Light classical	LIGHT M	4	○
5	14	Serious classical	CLASSICS	5	○
6	15	Other music	OTHER M	6	○
7	01	News	NEWS	7	○
8	02	Current Affairs	AFFAIRS	8	○
9	03	Information	INFO	9	○
10	04	Sport	SPORT	0	○
11	05	Education	EDUCATE	—	○
12	06	Drama	DRAMA	—	○
13	07	Culture	CULTURE	—	○
14	08	Science	SCIENCE	—	○
15	09	Varied	VARIED	—	○
16-30	16-30	Not yet assigned	NONE	—	—
31	31	Alarm	ALARM	—	—

# KR-V6050/7050

## CIRCUIT DESCRIPTION

### Dolby Pro-Logic Surround Matrix Decoder: SSM-2126 (X14: IC301)

#### FEATURES

Noise Generator and Autobalance Circuits are Contained On-Chip

Autobalance On/Off Control

4-Channel Pro-Logic and Dolby 3 (Surround Channel Defeat) Modes Available

Selectable Center Channel Modes—Normal, Wide-band, Phantom, Off

Direct Path Bypass (Normal 2-Channel Stereo Mode)

Wide Channel Separation

Any Channel to Another—25 dB min

Wide Dynamic Range—103 dB typ

Low Total Harmonic Distortion—0.02% typ

Available in a 48-Pin Plastic DIP

CMOS and TTL Compatible Control Logic

#### APPLICATIONS

Direct View and Projection TV

Integrated A/V Amplifiers

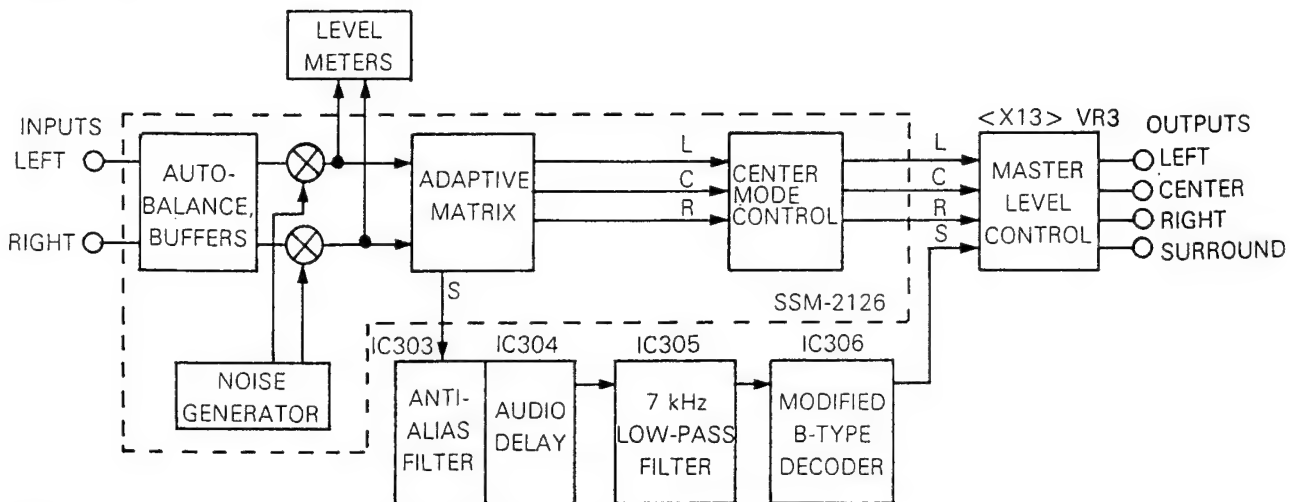
Laserdisc and CD-V Players

Video Cassette Recorders

Stand-Alone Surround Decoders

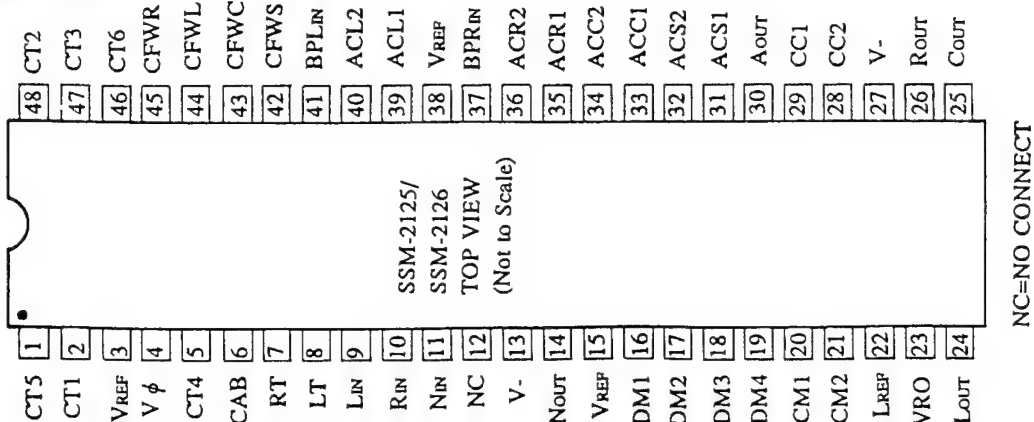
Home Satellite Receiver/Descramblers

#### FUNCTIONAL BLOCK DIAGRAM



\* Dolby is a registered trademark of Dolby Laboratories Corporation, San Francisco, California.

#### PIN CONNECTIONS



# KR-V6050/7050

## CIRCUIT DESCRIPTION

### PIN DESCRIPTION

Pin Number	Name	Function
1	CT5	Long Time Constant, C/S
2	CT1	Short Time Constant, L/R Comparators
3	V <sub>REF</sub>	Reference Voltage: Ground or Pseudoground
4	V+	Positive Supply
5	CT4	Short Time Constant, C/S Comparators
6	CAB	Autobalance Time Constant
7	RT	Buffered, Autobalanced Right Channel Signal
8	LT	Buffered, Autobalanced Left Channel Signal
9	L <sub>IN</sub>	Left Channel Input
10	R <sub>IN</sub>	Right Channel Input
11	N <sub>IN</sub>	Filtered Noise Input
12	NC	Do Not Connect
13	V-	Negative Supply (Ground in Single Supply)
14	N <sub>OUT</sub>	Noise Output
15	V <sub>REF</sub>	Reference Voltage: Ground or Pseudoground
16	DM1	Digital Operating-Mode Control Input
17	DM2	Digital Operating-Mode Control Input
18	DM3	Digital Operating-Mode Control Input
19	DM4	Digital Operating-Mode Control Input
20	CM1	Digital Center-Mode Control Input
21	CM2	Digital Center-Mode Control Input
22	L <sub>REF</sub>	Logic Reference Voltage (Threshold = L <sub>REF</sub> + 1.4 V)
23	V <sub>RO</sub>	V <sub>REF</sub> Out—Pseudoground Output
24	L <sub>OUT</sub>	Left Channel Output
25	C <sub>OUT</sub>	Center Channel Output
26	R <sub>OUT</sub>	Right Channel Output
27	V-	Negative Supply (Ground in Single Supply)
28	CC2	Center Normal-Mode Filter Input (Z = 15 kΩ)
29	CC1	Center Normal-Mode Filter Output

Pin Number	Name	Function
30	S <sub>OUT</sub>	Surround Channel Output
31	ACS1	Surround Channel Steering Signal AC Coupling and High-Pass Filter
32	ACS2	Surround Channel Steering Signal AC Coupling and High-Pass Filter
33	ACC1	Center Channel Steering Signal AC Coupling and High-Pass Filter
34	ACC2	Center Channel Steering Signal AC Coupling and High-Pass Filter
35	ACR1	Right Channel Steering Signal AC Coupling and High-Pass Filter
36	ACR2	Right Channel Steering Signal AC Coupling and High-Pass Filter
37	BPR <sub>IN</sub>	Filtered Right Channel Input to Steering Signal Generator
38	V <sub>REF</sub>	Reference Voltage: Ground or Pseudoground
39	ACL1	Left Channel Steering Signal AC Coupling and High-Pass Filter
40	ACL2	Left Channel Steering Signal AC Coupling and High-Pass Filter
41	BPL <sub>IN</sub>	Filtered Left Channel Input to Steering Signal Generator
42	CFWS	Surround Channel Full-Wave Rectifier Low-Pass Filter
43	CFWC	Center Channel Full-Wave Rectifier Low-Pass Filter
44	CFWL	Left Channel Full-Wave Rectifier Low-Pass Filter
45	CFWR	Right Channel Full-Wave Rectifier Low-Pass Filter
46	CT6	Short Time Constant, C/S
47	CT7	Short Time Constant, L/R
48	CT2	Long Time Constant, L/R

### Control States for DM1 – DM4 (PIN NO. ⑯ ~ ⑲)

DM1	DM2	DM3	DM4	Operating State	Function
1	1	1	1	Dolby + Channel ("Pro-Logic"), Autobalance On	-
1	1	0	1	Dolby + Channel ("Pro-Logic"), Autobalance Off	X
1	0	1	1	Dolby 3-Channel ("Dolby 3"), Autobalance On	
1	0	0	1	Dolby 3-Channel ("Dolby 3"), Autobalance Off	X
0	1	1	1	Surround Channel Noise	
0	1	1	0	Right Channel Noise	
0	1	0	1	Center Channel Noise	
0	1	0	0	Left Channel Noise	
0	0	X	1	Mute	X
0	0	1	0	Stereo Bypass, Auto-balance On	X
0	0	0	0	Stereo Bypass, Auto-balance Off	X

### Center Channel Functional Modes (PIN NO. ⑳, ㉑)

CM1	CM2	Mode	Function
0	0	Center Channel Off	X
0	1	Center Channel Wideband	
1	0	Phantom Center Channel	
1	1	Normal Center Mode	

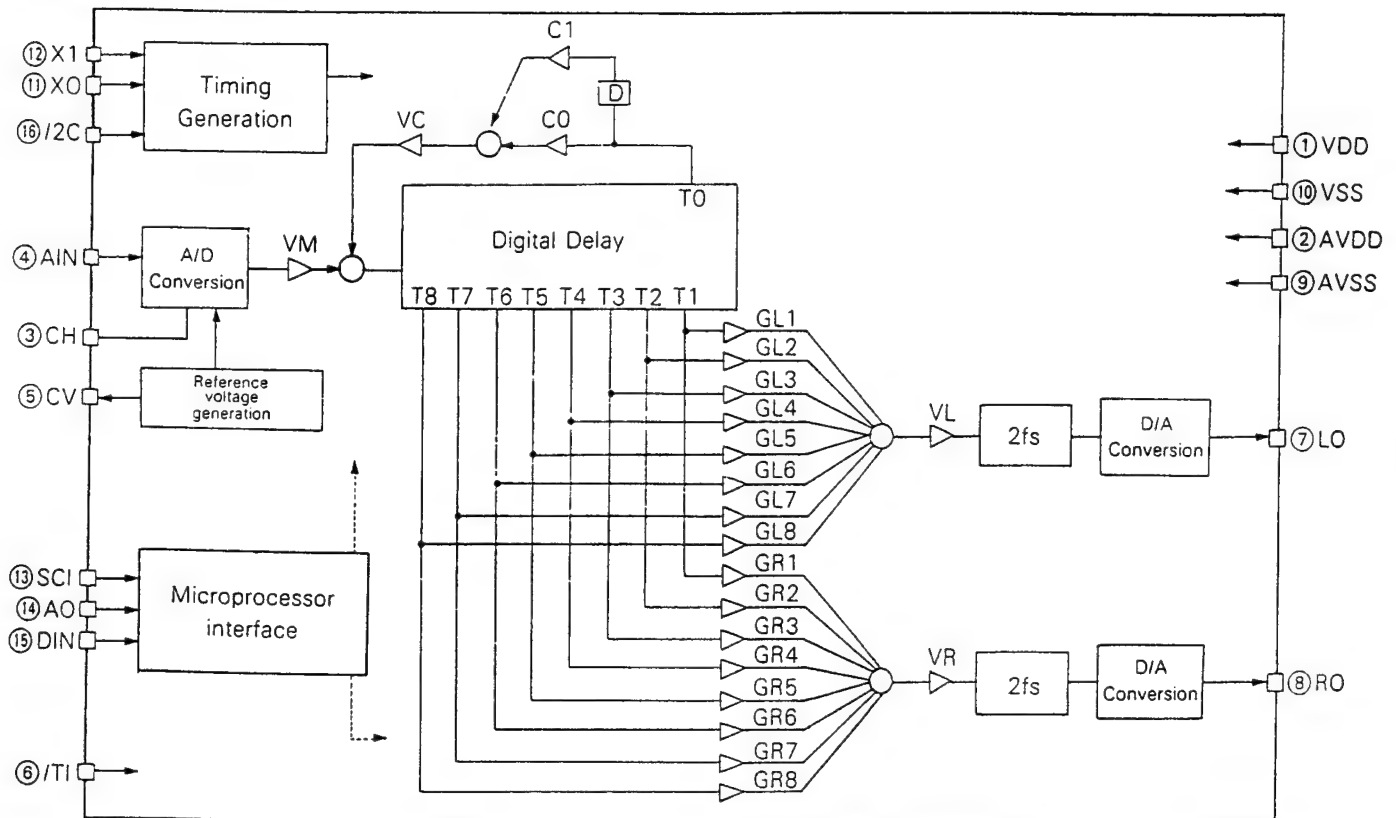
0: L 1: H X: H or L

# KR-V6050/7050

## CIRCUIT DESCRIPTION

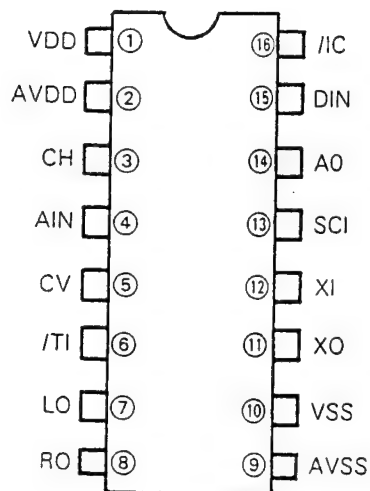
Digital delay IC: YM7128B (X14: IC304, 402)

Si-Gate CMOS PROCESS LSI



Pin Function description

Pin connection



Terminal No.	Terminal name	I/O	Function
1	VDD	—	Digital system +5 V power supply
2	AVDD	—	Analog system +5 V power supply
3	CH	O	Sample holding capacitor add-on terminal
4	AIN	I	Analog signal input terminal (Entered by CV voltage reference).
5	CV	O	A/D conversion reference voltage output
6	/TI	I+	Test input terminal (Normally unconnected)
7	LO	O	L-channel output (Analog output)
8	RO	O	R-channel output (Analog output)
9	AVSS	—	Analog system ground
10	VSS	—	Digital system ground
11	XO	O	Crystal oscillator (standard 7.16 MHz) connection (XI is the analog input terminal when using external clock)
12	XI	I	
13	SCI	I	Data shift clock input terminal
14	AO	I	Address/data identification signal input terminal
15	DIN	I	Data input terminal
16	/IC	I+	Initial clear terminal

Terminals bearing the mark "I+" contain built-in pull-up resistor.

# KR-V6050/7050

## CIRCUIT DESCRIPTION

Video amp. selector: CXA1558L (X09: IC2)

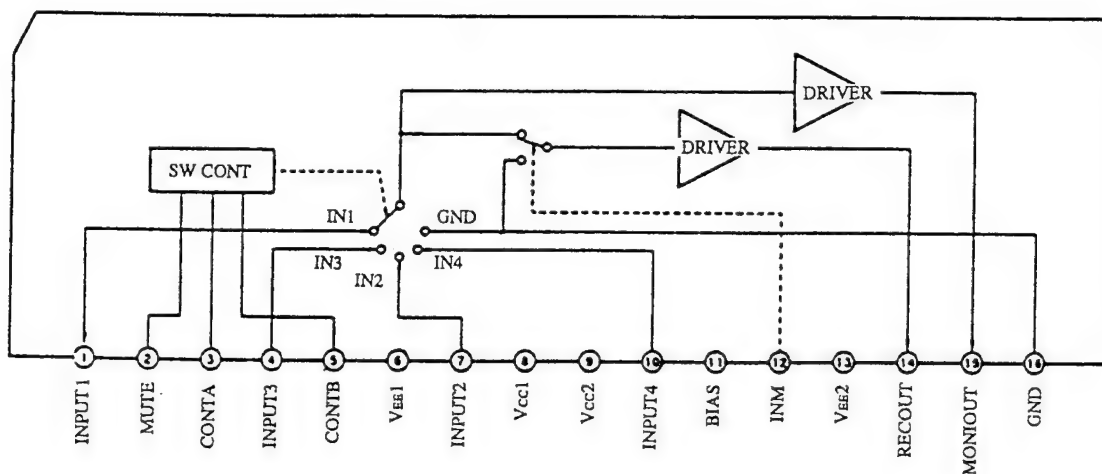
### Strong points

- 4-input, 2-output
- Low crosstalk Typ-70 dB
- Two built-in 75-Ohm driver systems with even voltage gain characteristics
- Built-in mute function
- One of the 2 output systems provided with inhibit (mute) function

### Construction

- Bipolar monolithic IC

Block diagram and terminal layout diagram



# KR-V6050/7050

## CIRCUIT DESCRIPTION

### Pin Description

Terminal Number	Terminal name	Terminal voltage (V)	Equivalent circuit	Terminal description
1 4 7 10	INPUT1 INPUT3 INPUT2 INPUT4	0		Signal input terminal. The standard input level is 1 V <sub>pp</sub> . The input resistance is 40 KΩ each. (Normally, these terminals should be grounded with 75Ω when using).
2	MUTE	$0 \leq L \leq 1.5^*$ $H \geq 3.5^*$		<p>This is the control terminal to mute the input signal. The mute function is canceled when this terminal is stuck to Low.</p> <p>All input signals are muted simultaneously when this terminal is stuck to HIGH. At that time, the output voltages of the terminals ⑭ and ⑮ are stuck to the GND potential.</p>
12	INH	$0 \leq L \leq 1.5^*$ $H \geq 3.5^*$		<p>Control terminal for Inhibit to output of ⑭ pin.</p> <p>The inhibit function is canceled when this terminal is stuck to LOW.</p> <p>The inhibit (mute) operation is carried out when this terminal is stuck to HIGH, and the output voltage of the terminal ⑭ is stuck to the GND potential.</p>
3 5	CONTA CONTB	$0 \leq L \leq 1.5^*$ $H \geq 3.5^*$		<p>Control terminal for input selection. One out of INPUT1 to INPUT4 is selected through the combination of LOW and HIGH of CONTA and CONTB.</p> <p>(For details refer to the output value list).</p>
6	V <sub>EE</sub> 1	-5*	—	Negative power supply terminal of the switch unit.
8	V <sub>CC</sub> 1	5*	—	Positive power supply terminal of the switch unit
9	V <sub>CC</sub> 2	5*	—	Positive power supply unit of the driver unit.
11	BIAS	0*		This terminal is used by grounding it. (Terminal for IC test).
13	V <sub>EE</sub> 2	-5*	—	Negative power supply terminal of the driver unit.



# KR-V6050/7050

## CIRCUIT DESCRIPTION

Terminal Number	Terminal name	Terminal voltage (V)	Equivalent circuit	Terminal description
14	RECOUT	0		<p>Signal output terminal.</p> <p>The standard output level is 1 <math>V_{OH}</math> when terminated with 75Ω.</p> <p>The signal selected by the control terminal out of INPUT1 to INPUT4 is outputted.</p> <p>This terminal is outputted the GND potential when the terminal (12) is stuck at HIGH.</p> <p>The 75Ω load can be driven directly.</p>
15	MINIOUT	0		<p>The standard output level is 1 <math>V_{OH}</math> when terminated with 75Ω.</p> <p>The signal selected by the control terminal out of INPUT1 to INPUT4 is outputted.</p> <p>The 75Ω load can be driven directly.</p>
16	GND	0*	—	GND terminal.

\* External Input terminal voltage

### In/Output value list

Control signal				Output	
CONTA	CONTB	MUTE	INH	RECOUT	MONIOUT
③ PIN	⑤ PIN	② PIN	⑫ PIN	⑭ PIN	⑮ PIN
L	L	L	L	Input signal to INPUT1	
L	H			Input signal to INPUT3	
H	L			Input signal to INPUT2	
H	H			Input signal to INPUT4	
•	•	H		GND voltage level	
L	L	L	H	GND voltage level	Input signal to INPUT1
L	H				Input signal to INPUT3
H	L				Input signal to INPUT2
H	H				Input signal to INPUT4
•	•	H			GND voltage level

\* Don't Care

$0 \leq L \leq 1.5 \text{ V}$

$H \geq 3.5 \text{ V}$

# KR-V6050/7050

## CIRCUIT DESCRIPTION

### 7. Compressor/Expander IC: NE571N (X14: IC302)

#### 7-1. Analog converter circuit

The S/N ratio is lowered due to the digital delay circuit. To offset this, a noise reduction is applied.

The signal is compressed down to half the dynamic range by the compressor circuit and is passed through a digital delay circuit. After that, it is expanded to twice by the expander circuit to ensure the original dynamic range.

The  $\mu$ PC1571C is a high-performance integrated circuit capable of constituting a high-precision analog converter by a lesser number of externally connected components.

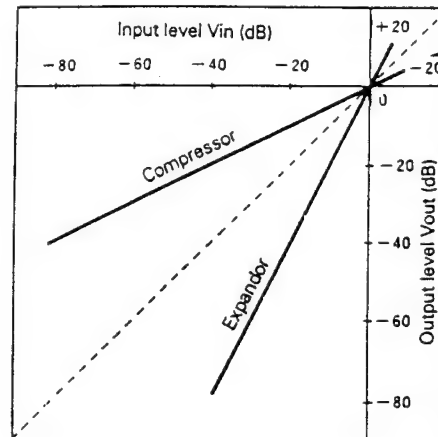
Incorporated within one package are a reference voltage circuit and a two-fold operation amplifier, gain cell and rectifier.

This IC can be applied to a limiter, a voltage controlled amplifier, an ordinary home-use device noise reduction circuit, etc., including a compandor as in a telephone system.

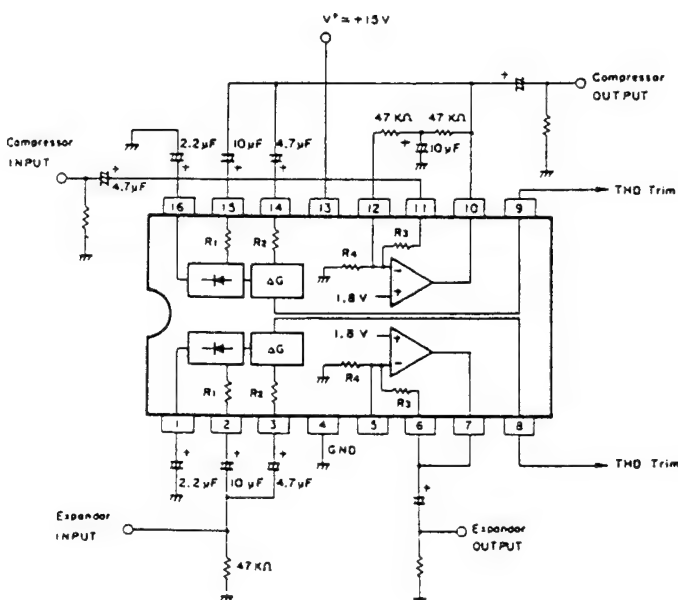
#### 7-2. Features

- Operation on single power, +6V to +16V
- With built-in identical circuits of 2 channels, a compandor can be formed by one package.
- Dynamic range, approx. 70dB
- Distortion rate adjustable

#### 7-3. Standard transfer characteristics



#### 7-4. Standard application circuit example



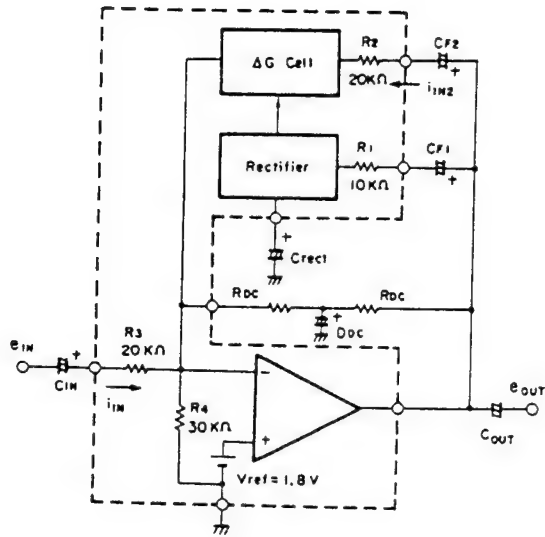
#### 7-5. Description of terminals

Pin No.	Function	Pin No.	Function
1	Rect1	9	THD Trim 2
2	Rect IN 1	10	OUT 2
3	ΔG Cell IN 1	11	R3 2
4	GND	12	Ii 2
5	Ii 1	13	Vcc
6	R3 1	14	ΔG Cell IN 2
7	OUT 1	15	Rect IN 2
8	THD Trim 1	16	Rect2

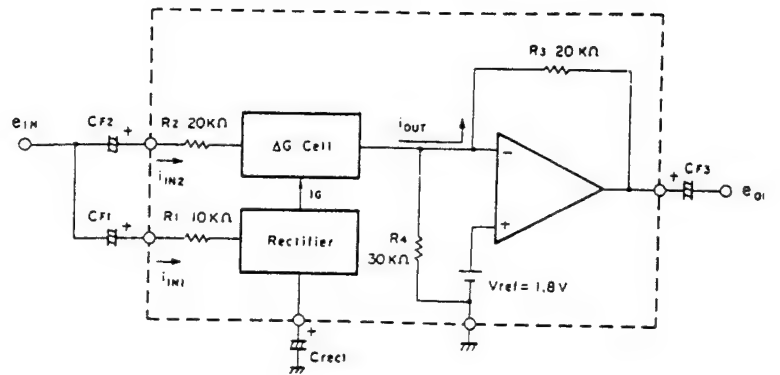
# KR-V6050/7050

## CIRCUIT DESCRIPTION

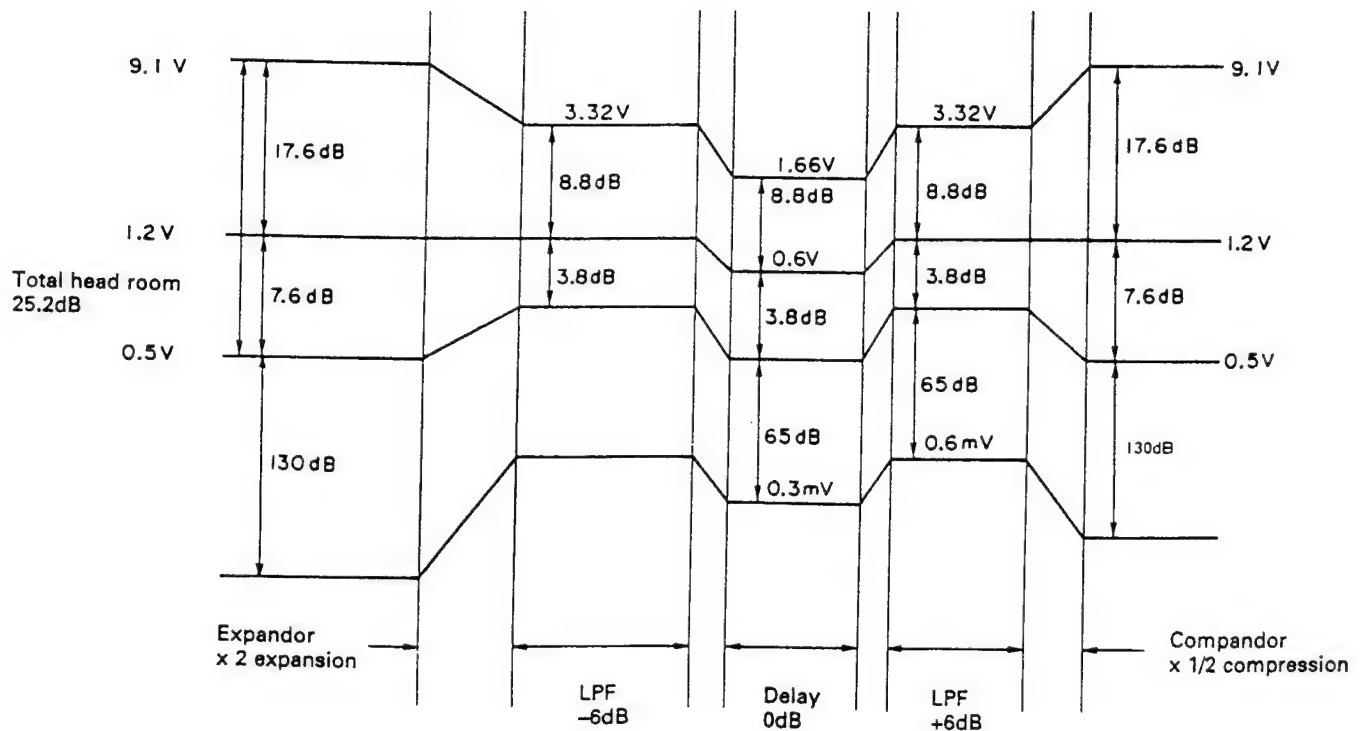
7-6. Compressor application circuit example



7-7. Operation as an expander



7-8. Theoretical values of head room and noise level with compressor/expander circuit



# KR-V6050/7050

## ADJUSTMENT

AM. Section: If alignment point is "--", Confirm the value.  
If not. Replace the front end pack.

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION		SELECTOR: FM					
1	DISCRIMINATOR	(A) 98.0 MHz 1 kHz, $\pm 75$ kHz dev 60 dB $\mu$ (ANT input)	Connect a DC voltmeter between TP3 and TP4. (XI 3-)	AUTO or MONO 98.0 MHz	L2 (X14-)	0 V	(a)
2	DISTURTION (MONO) <T.E type only>	(C) 98.0 MHz 1 kHz, $\pm 68.25$ MHz dev Selector: L or R Pilot: $\pm 6.75$ kHz dev 60 dB $\mu$ (ANT input)	(B)	98.0 MHz	L9 (X14-)	Minimum distortion	
3	DISTORTION (STEREO)	(C) 98.0 MHz 1 kHz, $\pm 68.25$ kHz dev Selector: L or R Pilot: $\pm 6.75$ kHz dev 60 dB $\mu$ (ANT input)	(B)	98.0 MHz	IFT (X02-)	Minimum distortion. (L or R)	
4	SEPARATION	(C) 98.0 MHz Stereo signal 60 dB (ANT input)	(B)	AUTO 98.0 MHz	VR5 (X14-)	Minimum crosstalk	
5	TUNING LEVEL	(A) 98.0 MHz 0 dev 19 dB $\mu$ (ANT input) 75 $\mu$	(B)	AUTO or MONO 98.0 MHz	VR1 (X14-)	Adjust VR1 and stop at the point where ED1 (TUNED) goes on.	
AM SECTION		SELECTOR: AM					
(1)	TUNING LEVEL	(D) 1000 (999) kHz 26 dB $\mu$ (ANT input)	(B)	—	VR3 (X14-)	Adjust VR2 and stop at the point where ED1 (TUNED) goes on.	
AUDIO SECTION							
<1>	IDLE CURRENT	—	(E) Connect a DC voltmeter across CP1 (L) CP2 (R) CP3 (C) (X09-)	Volume: 0	VR1 (L) VR2 (R) VR3 (C) (X09-)	10 mV (L, R) 5 mV (C)	(b)

# KR-V6050/7050

## REGLAGE

Section AM: Si le point d'alignement est \_\_, confirmer la valeur.

Sinon, remplacer le bloc avac.

N°.	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MF SELECTEUR DES ENTRÉES: MF							
1	DISCRIMINATEUR	(A) 98.0 MHz 1kHz, $\pm 75$ kHz dév 60 dB $\mu$ (Entrée ANT)	Relier un voltmètre CC entre les TP3 et TP4. (X13-)	AUTO ou MONO 98.0 MHz	L2 (X14-)	0 V	(a)
2	DISCRIMINATEUR (MONO) (T, E Type Seulement)	(c) 98.0 MHz 1 kHz, $\pm 68.75$ MHz dév Sélection; L ou R Signal pilote: $\pm 6.75$ kHz dév 68 dB $\mu$ (Entrée ANT)	(B)	98.0 MHz	L9 (X14-)	Distorsion minimale.	
3	DISTORSION (STEREO)	(c) 98.0 MHz 1 kHz, $\pm 68.25$ kHz dév Sélection; L ou R Signal pilote: $\pm 6.75$ kHz dév 60 dB $\mu$ (Entrée ANT)	(B)	98.0 MHz	IFT (X02-)	Distorsion minimale. (L ou R)	
4	SEPARATION	(c) 98.0 MHz STEREO Signal 60 dB $\mu$ (Entrée ANT)	(B)	AUTO 98.0 MHz	VR5 (X14-)	Diaphonie minimale.	
5	NIVEAU D'ACCORDER	(A) 98.0 MHz 0 dév - 19 dB $\mu$ (Entrée ANT) 75 $\Omega$	(B)	AUTO ou MONO 98.0 MHz	VR1 (X14-)	Ajuster VR1 et arrêter le mouvement de VR1 au moment où le ED1 (TUNED) s'allume.	
SECTION MA SELECTEUR: AM							
(1)	NIVEAU D'ACCORDER	(A) 1000 (999) kHz 26 dB $\mu$ (Entrée ANT)	(B)	—	VR3 (X14-)	Ajuster VR2 et le mouvement de VR4 au moment où le ED1 (TUNED) s'allume.	
SECTION AUDIO							
[1]	COURANA DE POLARISATION	—	(E) Connecter un voltmètre CC sur CP1 (L) CP2 (R) CP3 (L) (X09-)	Volume: 0	VR1 (L) VR2 (R) VR3 (L) (X09-)	10 mV (L, R) 5 mV (C)	(b)

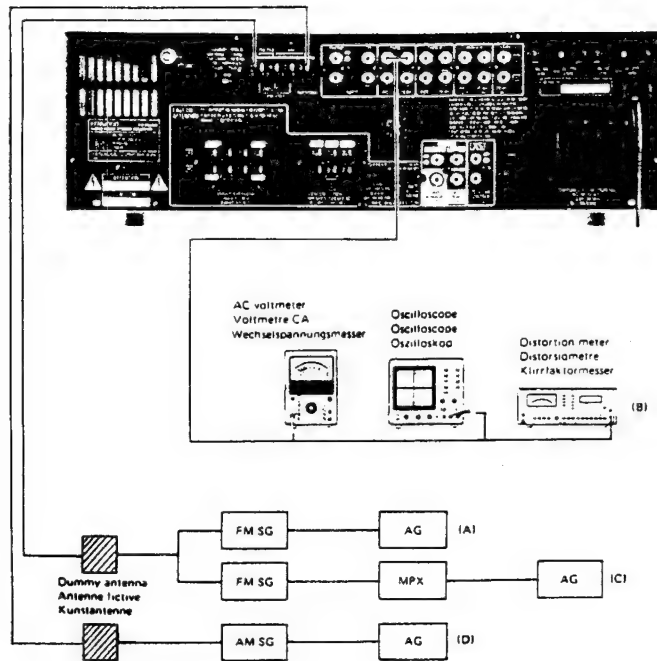
# KR-V6050/7050

## ABGLEICH

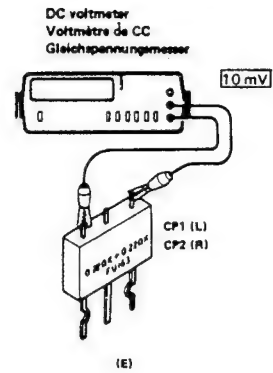
MW-Teil: Wenn der Ausrichtpunkt — ist, den Wert überprüfen.  
Wenn nicht, die Fronteinheit auswechseln.

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
UKW-EMPFANGSABTEILUNG EINGANGSUMSCHALTER: FM							
1	DISKRI-MINATOR	(A) 98.0 MHz 1 kHz, $\pm 75$ kHz Hub 60 dB $\mu$ (ANT-Eingang)	Einen Gleichspannungsmesser zwischen TP3 und TP4 anschließen (X13-)	AUTO oder MONO 98.0 MHz	L2 (X14-)	0 V	(a)
2	DISKRIMINATOR (2)	(A) 98.0 MHz 1 kHz, $\pm 75$ kHz Hub 60 dB $\mu$ (ANT-Eingang)	(B)	MONO 98.0 MHz	T3 (X05-)	Minimal Klirrfaktor.	
3	KLIRRFAKTOR (STEREO)	(c) 98.0 MHz 1 kHz, $\pm 68.25$ kHz Hub Wähler: L oder R Piloten: $\pm 6.75$ kHz Hub 60 dB $\mu$ (ANT-Eingang)	(B)	98.0 MHz	Frontende IFT (X05-)	Minimal Klirrfaktor.	
4	STEREO KANAL TRENNUNG	(c) 98.0 MHz 1 kHz, $\pm 68.25$ kHz Hub Wähler: L oder R Piloten: $\pm 6.75$ kHz Hub 60 dB $\mu$ (ANT-Eingang)	(B)	98.0 MHz	VR4 (X05-)	Minimales Übersprechen. Eine Ausgleichregelung kann notwendig sein, falls links-zu-rechts und rechts-zu-links. Trennungen ungleich sind.	
5	ABSTIMM PEGEL	(A) 98.0 MHz 0 Hub — 19 dB $\mu$ (ANT-Eingang) 75 $\Omega$	(B)	AUTO oder MONO 98.0 MHz	VR1 (X14-)	Den Pegel wiederstand aufdrehen, und dem VR1 Halt geben wobei den ED1 (TUNED) anzeiger leuchtet wird.	
MW-EMPFANGSABTEILUNG Die MW Rahmenantenne angebracht lassen. WAHLER: AM							
(1)	ABSTIMM PEGEL	(A) 1000 (999) kHz 26 dB $\mu$ (ANT-Eingang)	(B)	—	VR3 (X14-)	Den Pegel wiederstand aufdrehen und dem VR2 Halt geben wobei den ED1 (TUNED) anzeiger leuchtet wird.	
AUDIO-ABTEILUNG							
[1]	LEER-LAUFSTROM	—	(E) Einen Gleichspannungsmesser über CP1 (L) CP2 (R) anschließen. CP3 (L) (X09-)	Volume: 0	VR1 (L) VR2 (R) VR3 (L) (X09-)	10 mV (L, R) 5 mV (C)	(b)

## ADJUSTMENT/REGLAGE/ABGLEICH

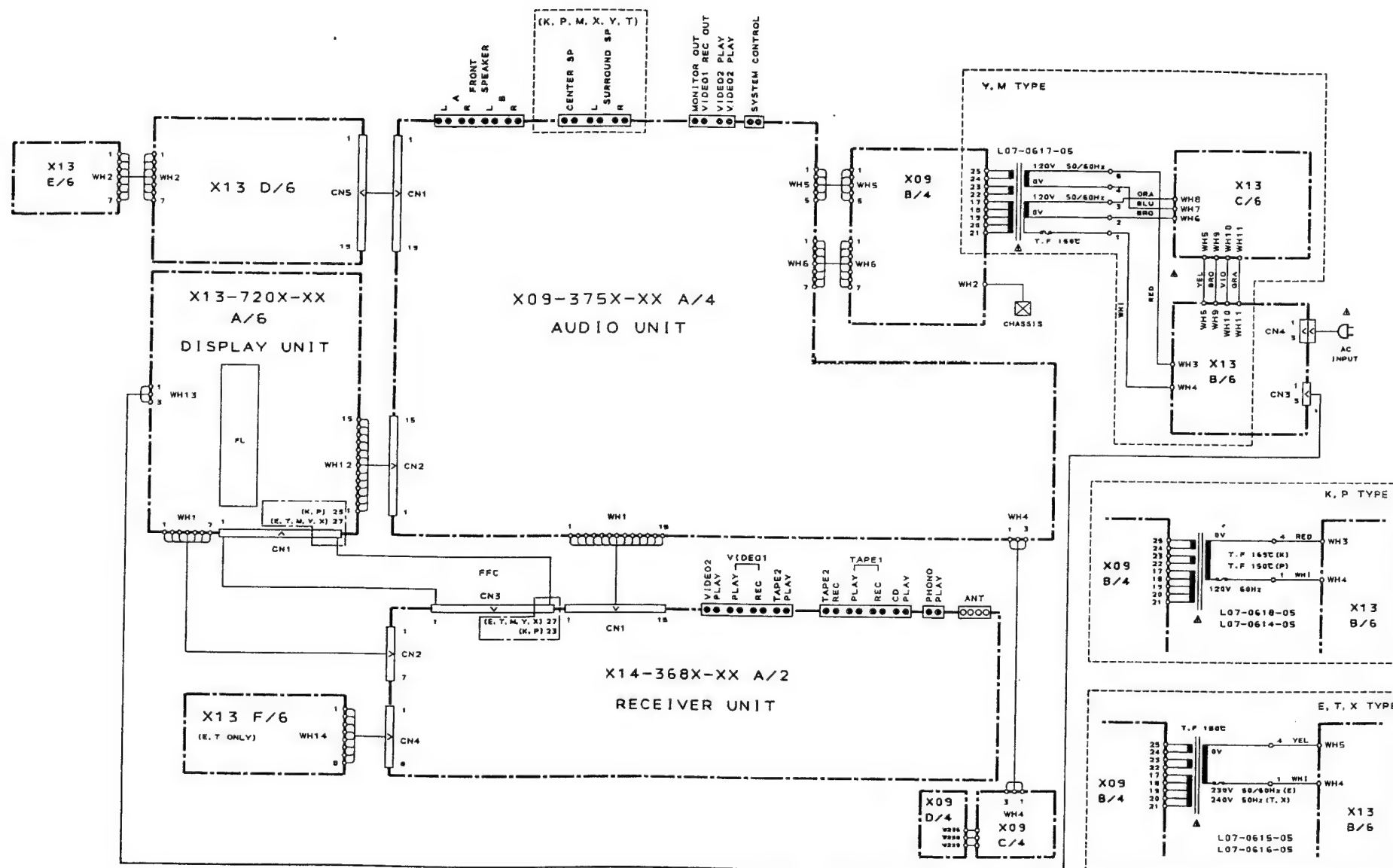


### System connections/Raccordements du système/System-Anschlusse



# KR-V6050/7050 KR-V6050/7050

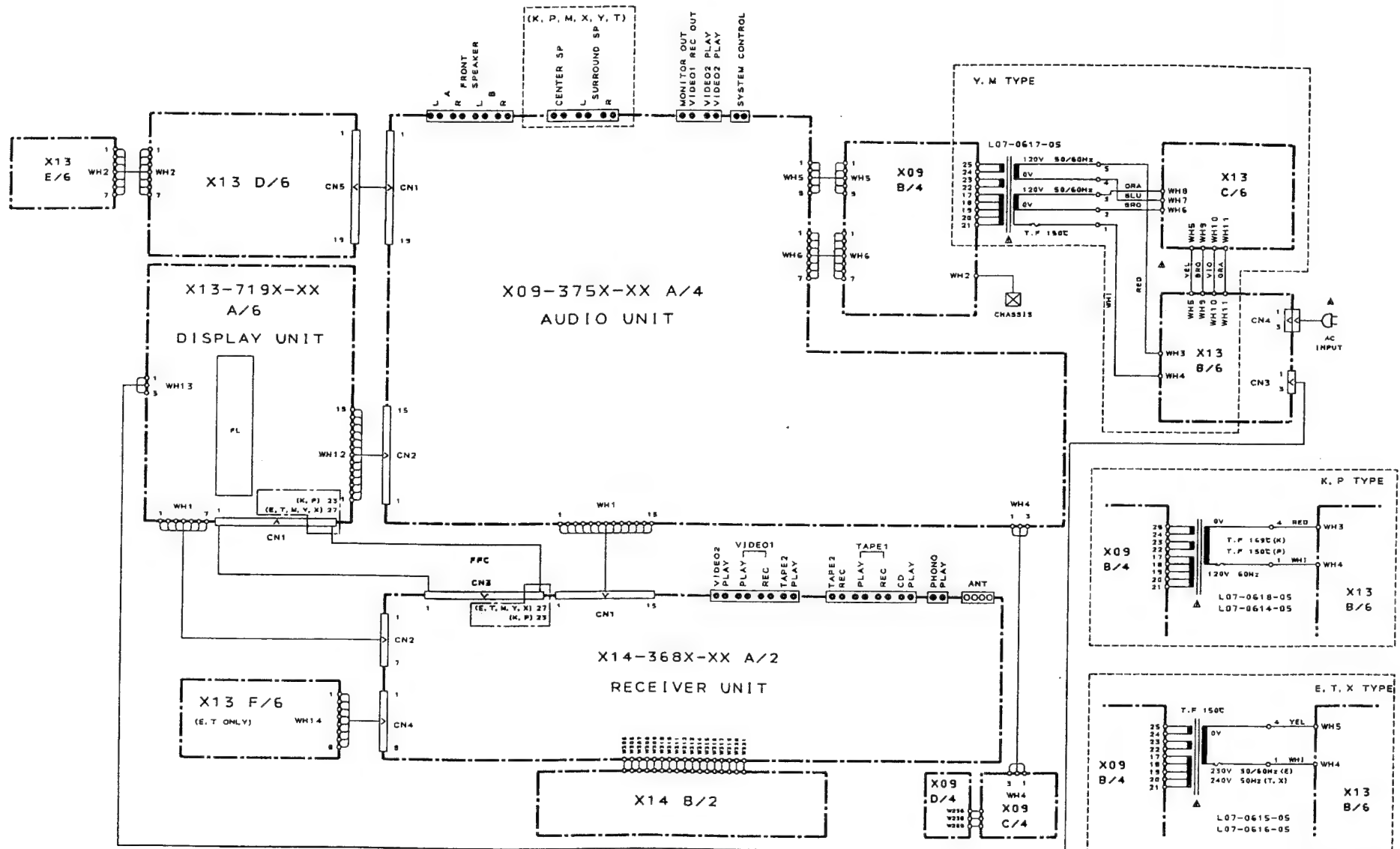
## WIRING DIAGRAM (KR-V6050)





# KR-V6050/7050      KR-V6050/7050

## WIRING DIAGRAM (KR-V7050)



# PC BOARD (Component side view)

AUDIO UNIT (X09-375X-XX)

2

3

4

5

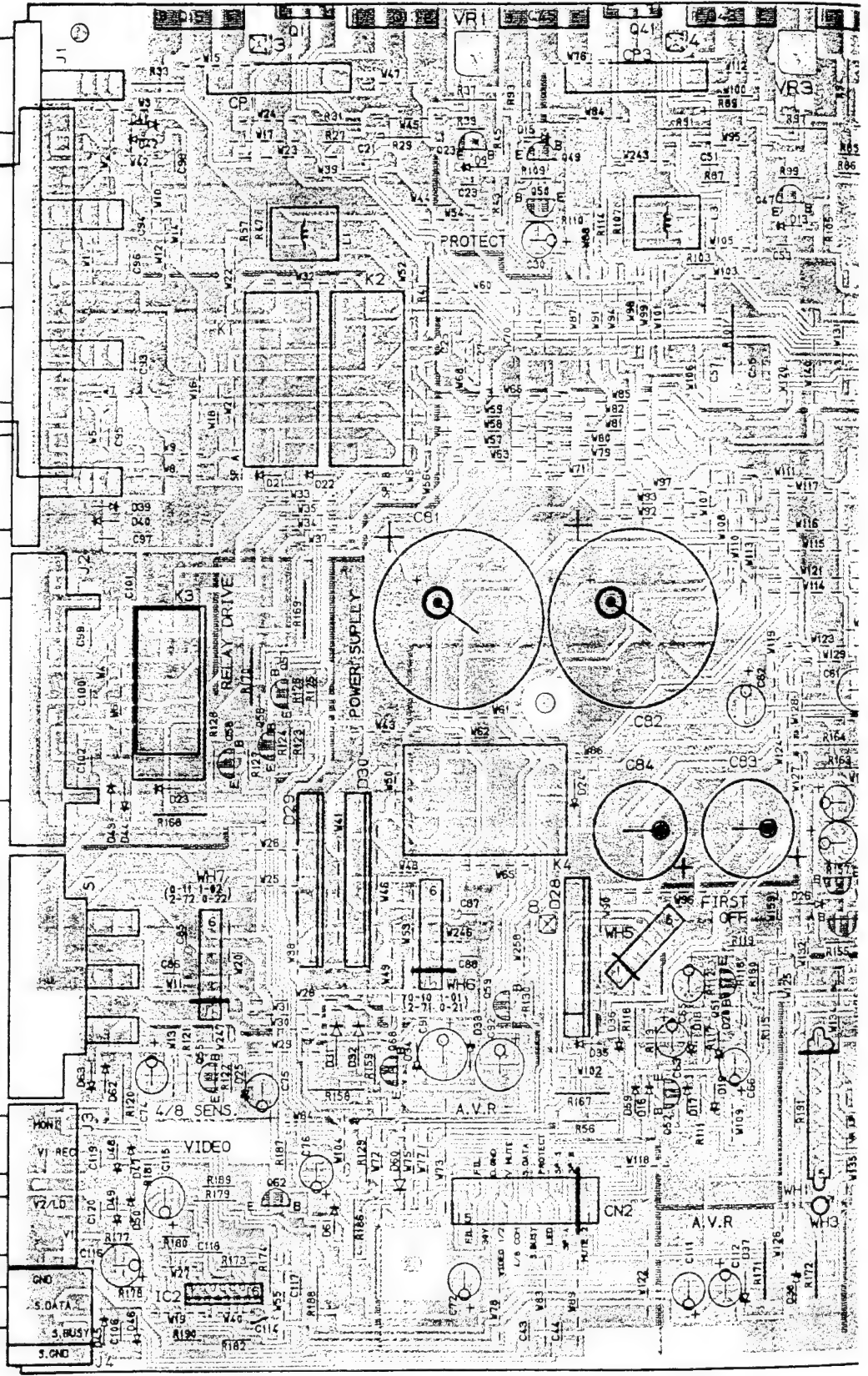
6

7

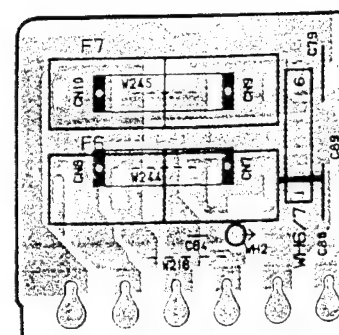
FRONT SPEAKERS  
(A or B : 4~16Ω, A and B : 8~16Ω)  
+ L - - R +

(KR-V7050  
KR-V6050 (K,P,Y,M,X))  
REAR CENTER  
SPEAKER  
(8~16Ω) (8~16Ω)  
L R C

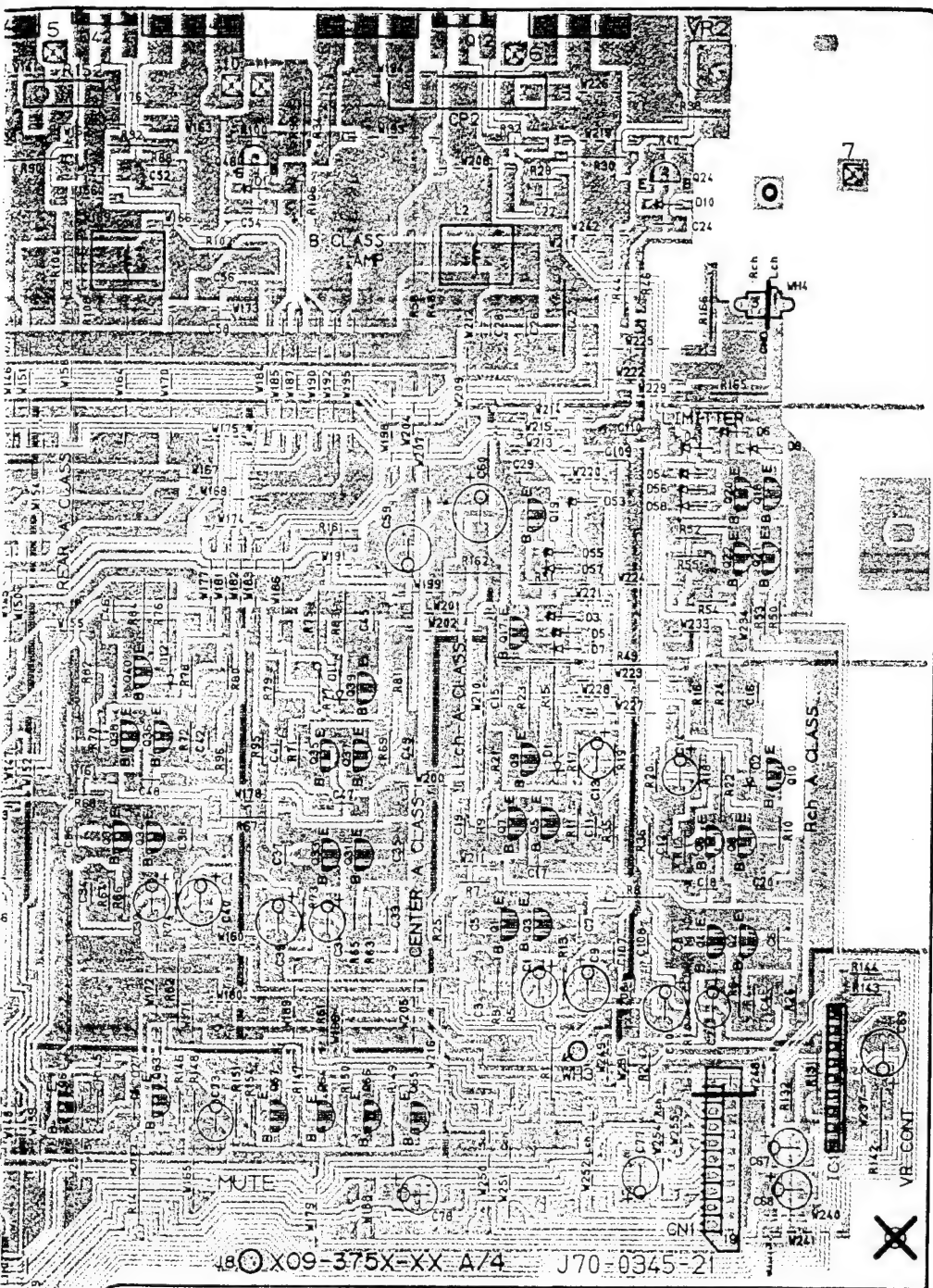
VIDEO 1  
PLAY REC  
IN OUT  
VIDEO 2 VIDEO  
PLAY MONITOR (KR-V6050 ONLY)  
SYSTEM CONTROL  
IMPEDANCE SELECTOR  
8Ω OR MORE  
LESS THAN 8Ω



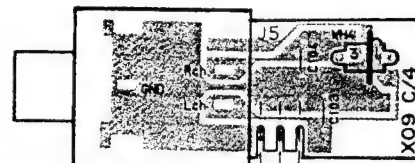
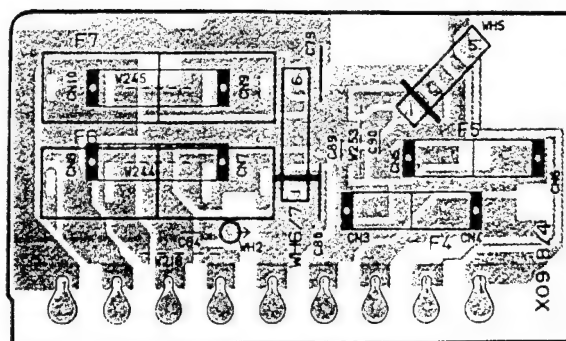
X-XX)



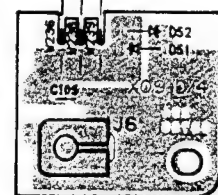




FRONT  
→



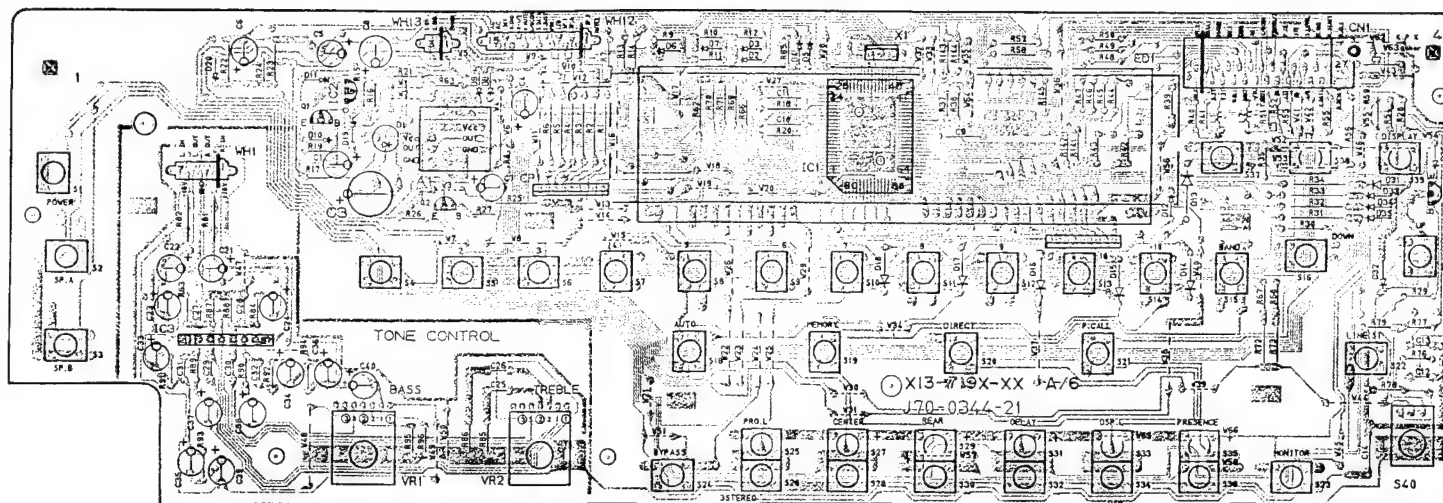
PHONES



Refer to the schematic diagram for the values of resistors and capacitors.

K L M N O P Q R S

(X13-719X-XX) : KR-V7050

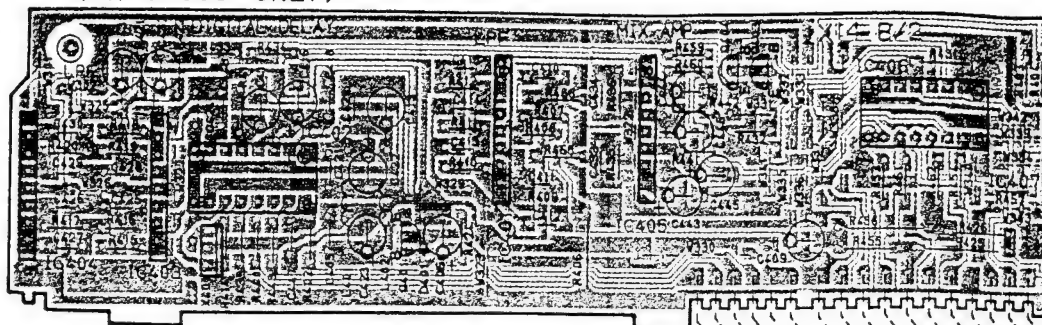


53

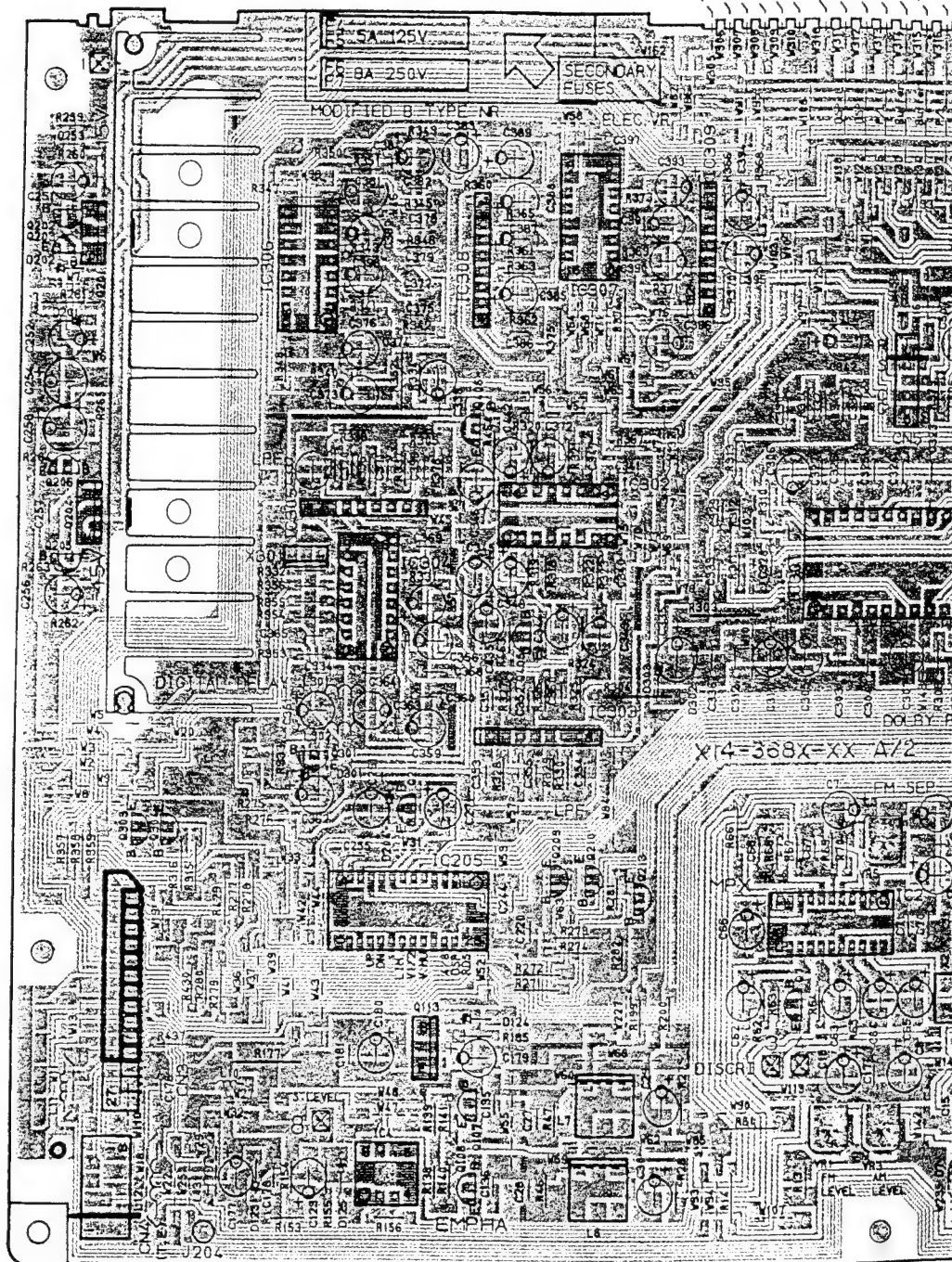
# PC BOARD (Component side view)

## RECEIVER UNIT (X14-368X-XX)

(KR-V7050 ONLY)



FRONT  
←



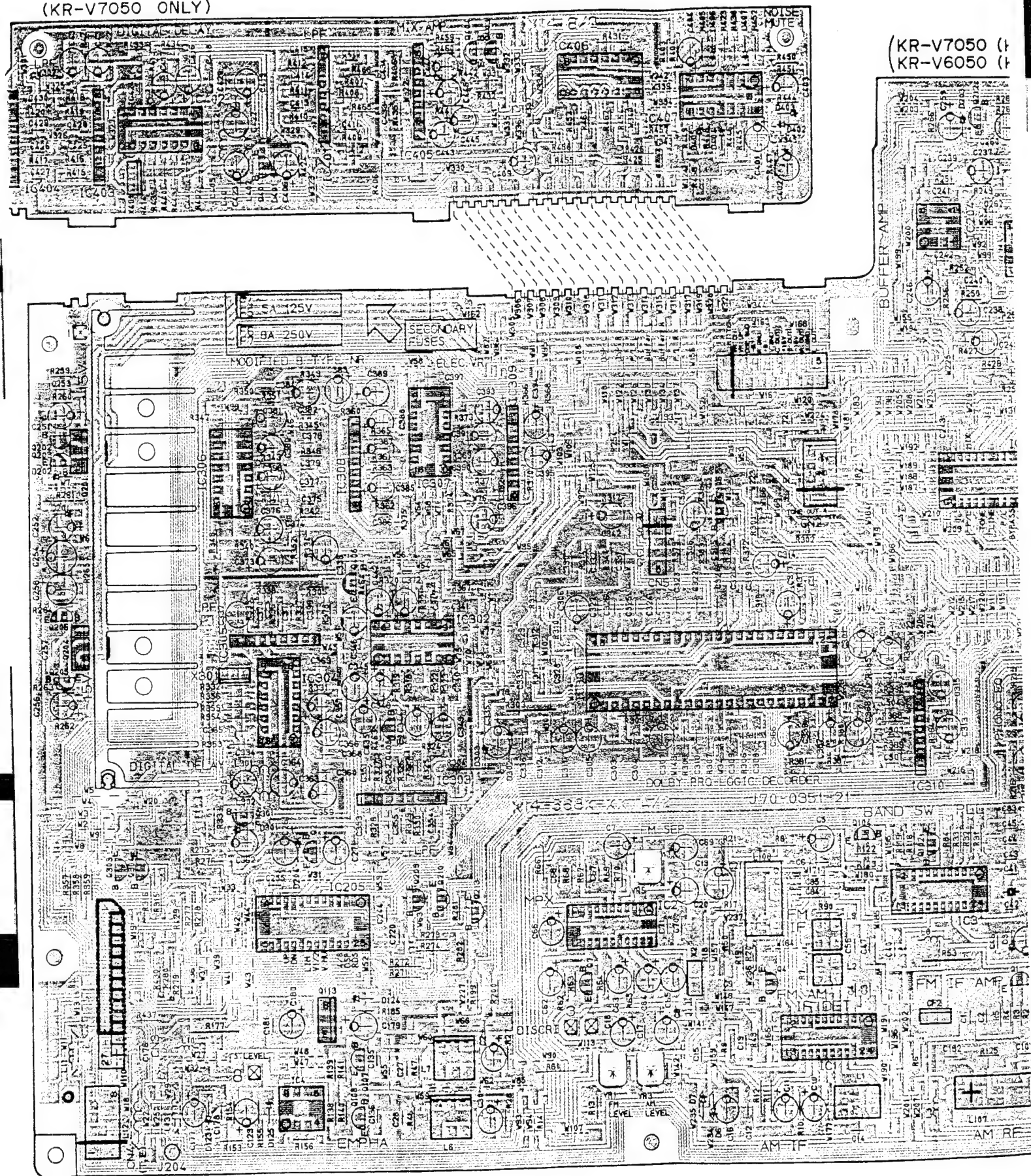


Component side view)

(-368X-XX)

(KR-V7050 ONLY)

(KR-V7050 (1  
KR-V6050 (1

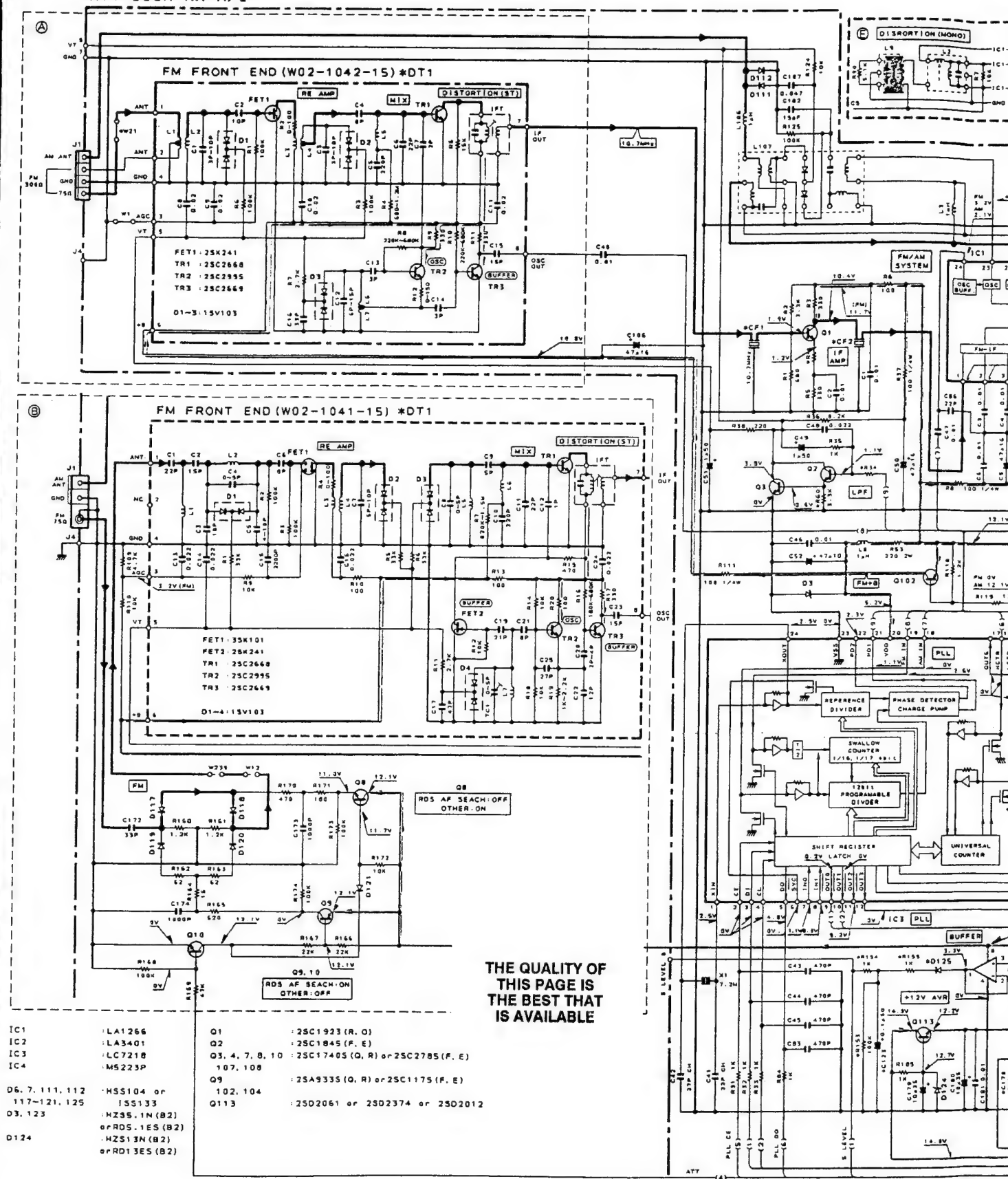


Refer to th





X14-368X-XX A/2

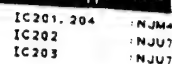


UNIT	ABB	DIRECTION	REF. NO	A	B	C	D	E	R4	R14	R17	R18	R19	R20	R21	R34	R43	R46 R47	R50	R60	R67 R68	R109	R110	R153	R154	R155	R156	R160 R161	R162 R163	R164 R165	R166 R167	R168	R169	R170	R171	R172	
				0-11	K,P	USA, CANADA	YES	NO	NO	YES	NO	56	4.7K	15K	12K	NO	NO	68	1/4W	10K	15K	35K	NO	3.3K	100K	WI	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
0-22	Y,M	PX, OTHER AREAS	YES	NO	YES	YES	NO	56 <td>4.7K</td> <td>15K</td> <td>12K</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>68<td>1/4W</td><td>10K</td><td>35K</td><td>35K</td><td>NO</td><td>3.3K</td><td>100K</td><td>WI</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td></td>	4.7K	15K	12K	NO	NO	NO	68 <td>1/4W</td> <td>10K</td> <td>35K</td> <td>35K</td> <td>NO</td> <td>3.3K</td> <td>100K</td> <td>WI</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td>	1/4W	10K	35K	35K	NO	3.3K	100K	WI	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
0-72	X	AUSTRALIA	YES	NO	NO	YES	NO	56 <td>4.7K</td> <td>15K</td> <td>12K</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>68<td>1/4W</td><td>10K</td><td>35K</td><td>35K</td><td>NO</td><td>3.3K</td><td>100K</td><td>WI</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td></td>	4.7K	15K	12K	NO	NO	NO	68 <td>1/4W</td> <td>10K</td> <td>35K</td> <td>35K</td> <td>NO</td> <td>3.3K</td> <td>100K</td> <td>WI</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td>	1/4W	10K	35K	35K	NO	3.3K	100K	WI	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2-71, 0-51 T	K	ENGLAND, EUROPE	NO	YES	NO	NO	YES	10	5.6K	12K	18K	3.3K	2.2K	47	1/4W	1K	35K	3.3K	4.7K	NO	220K	4.7K	10K	100K	1K	1W	10K	1.2K	52	15	620	22K	100K	47K	470	180	10K


DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

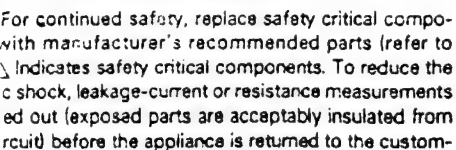
Die angegebenen Gleichspannungshochohmigen Spannungsmesserkenn die Meßwerte aufgrund von Unterschieden einzelner Instrumenten oder Geräte



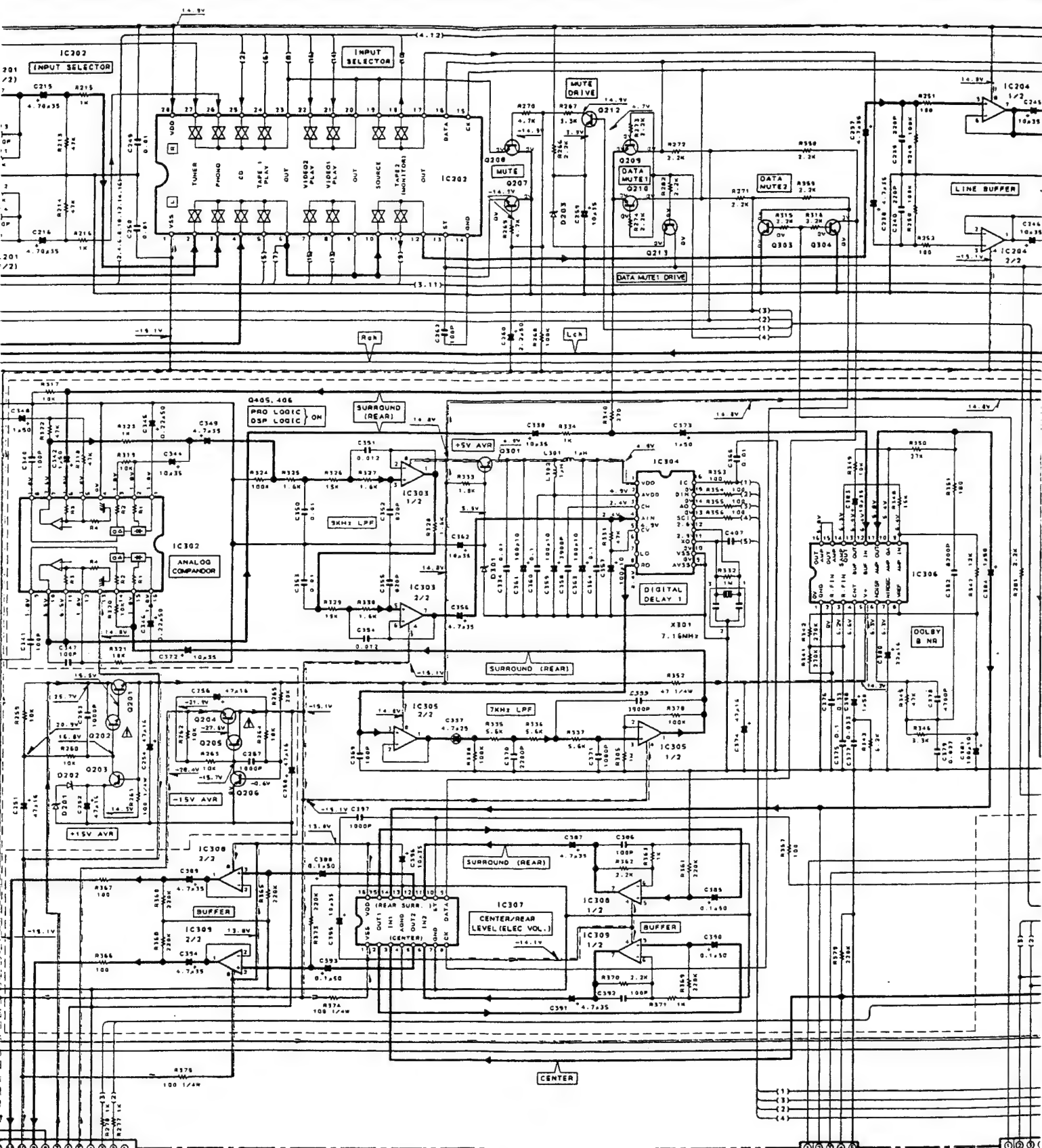
c.c. doivent être mesurées avec un voltmètre à a.c. Les valeurs peuvent différer légèrement des valeurs inhérentes aux appareils et aux instruments individuels.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

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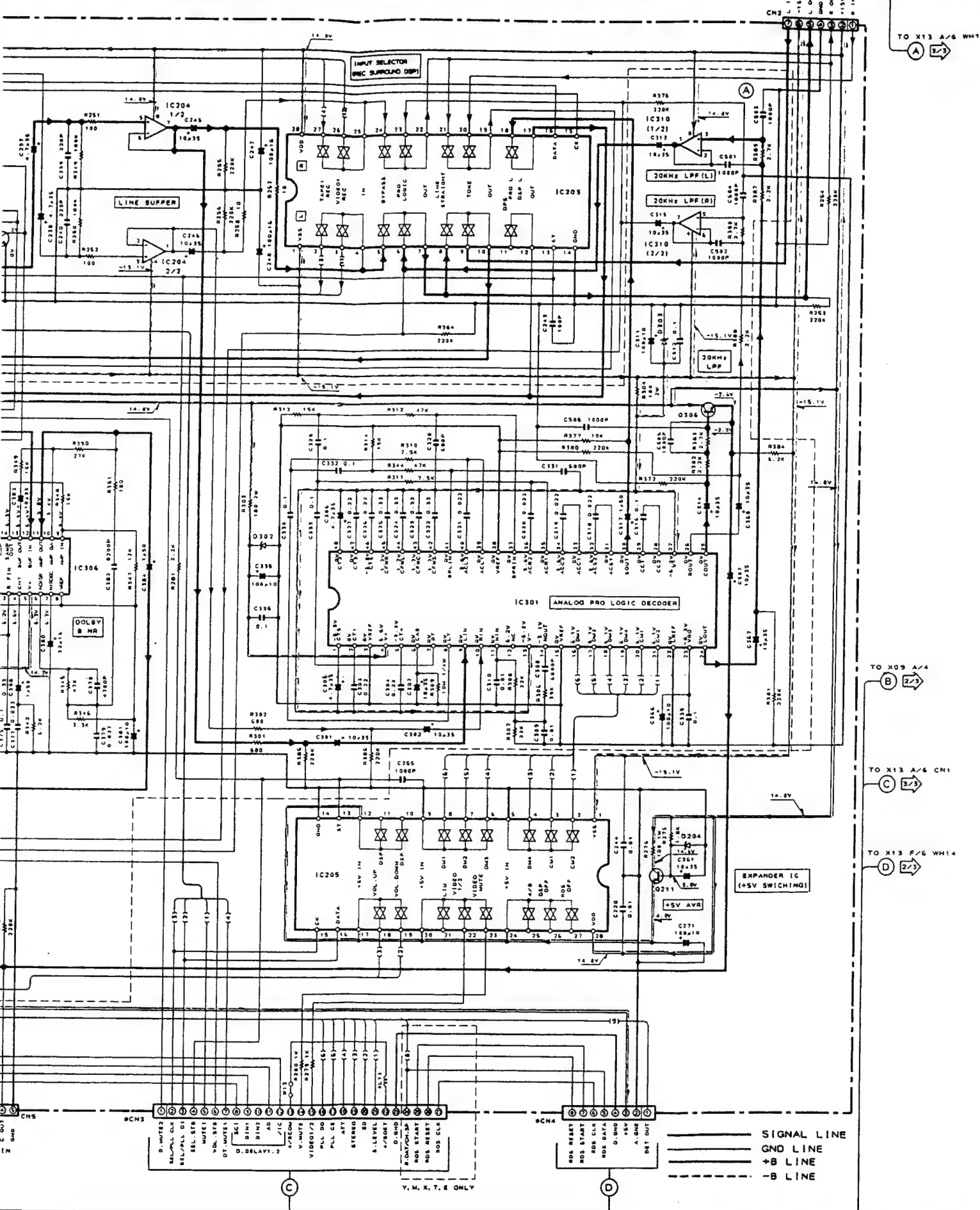
K		M		N		O	
IC306	LA2730	Q201, 204	25D2061 or 25D2012 or 25D2374	Q205, 206, 212	25A9335 (Q, R) or 25A1046 (V, GR) or	Q201, 302, 303	RO6, 2
IC307	TC9213P	Q202, 203, 209	25C17405 (Q, R) or 25C2458 (V, GR) or		25A1175 (P, E) or 25A1309A (Q, R)	Q202	RO8, 2
		210, 213, 303	25C2785 (P, E) or 25C3311A (Q, R)	Q207, 208,	25C2878 (B)	Q203	RO3, 9
		304, 306		Q211, 301	25C2003 (L, K)		



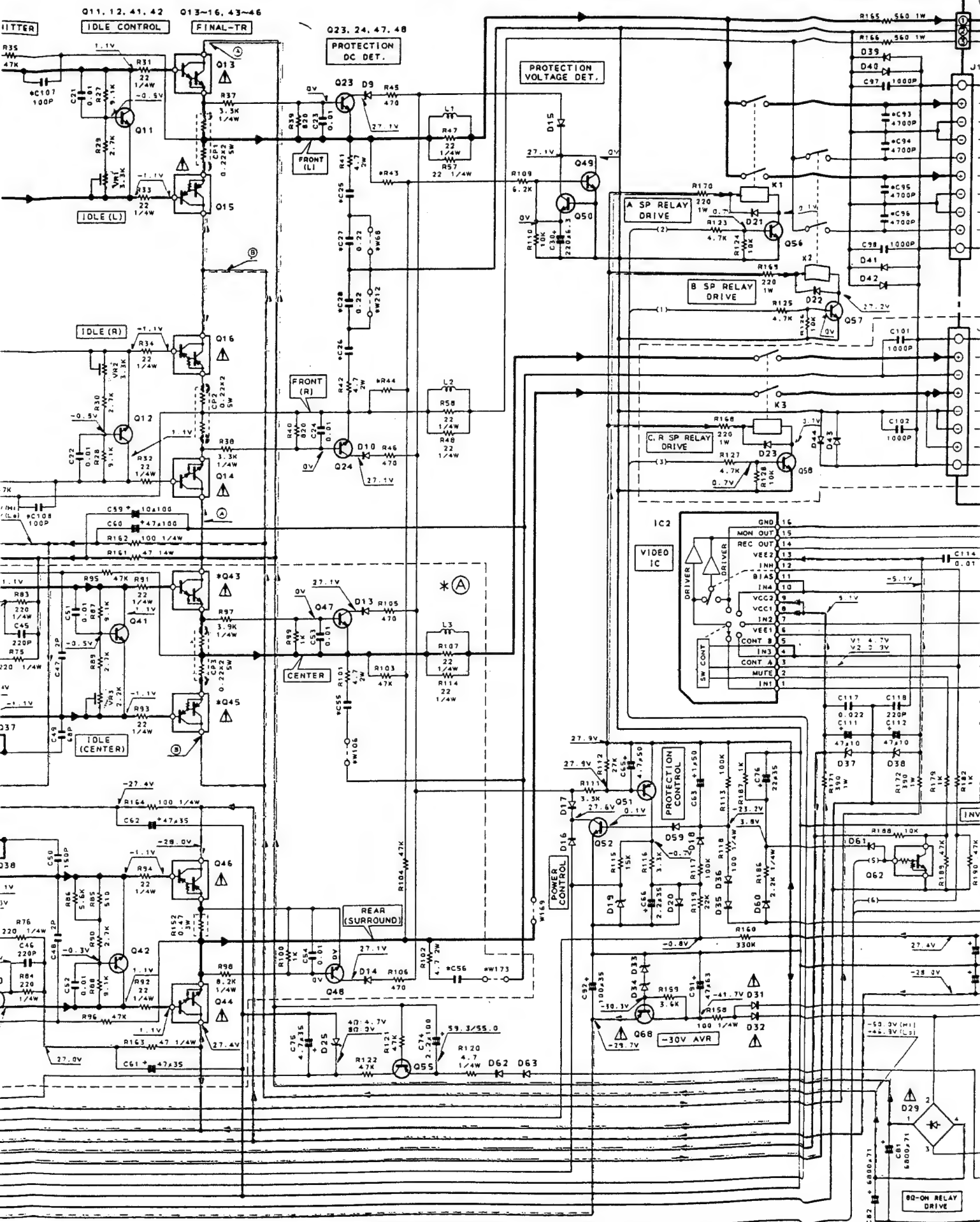
UNIT	ABB	REF. NO.	DESTINATION	A	C201, 202, 221, 222, 225, 226, 229, 230, 233-236, 241, 242	CNS, Q303, 304, R315, 316, 358, 359, 375	CN3	L11	CN4
0-11	K, P		USA, CANADA	YES	NO	YES	23P	YES	NO
0-22	Y, M		PX, OTHER AREAS	YES	NO	YES	27P	YES	NO
0-72	X		AUSTRALIA	YES	NO	YES	27P	YES	NO
2-72	E		EUROPE	NO	YES	NO	27P	NO	YES
0-51	T		ENGLAND	YES	NO	YES	27P	NO	YES

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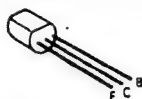
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IS AVAILABLE

D1, 2, 9-18, 20-23,  
 26, 35, 36, 59-63 : HSS104Acr 1S  
 D19, 25, 37, 38 : HZ55.1N (B2) c  
 D27 : HZ54.7N (B2) c  
 D28 : D35BA20F03 c  
 D29 : D5SBA20F03 c  
 D31, 32 : S5688 or 1S  
 D33 : HZ515N (B2) or  
 D34 : HZ516N (B2) or  
 D39-52 : HSS104 or 1S

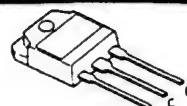
**For Service Manuals Contact**  
**MAURITRON TECHNICAL SERVICES**  
8 Cherry Tree Rd, Chinnor  
Oxon OX9 4QY  
Tel: 01844-351694 Fax: 01844-352554  
Email: [enquiries@mauritron.co.uk](mailto:enquiries@mauritron.co.uk)







2SA1123  
2SA1534A  
2SA992  
2SC1845  
2SC1923  
2SC2003  
2SC2631  
2SC2878  
2SC3940A



2SB1493BT  
2SB1493BT\*1  
2SB1531BT  
2SD2255BT  
2SD2255BT\*1  
2SD2340BT



2SA1175  
2SC2785



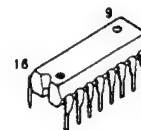
2SD2061



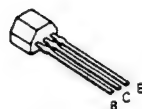
2SB1470BT  
2SD2222BT



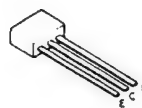
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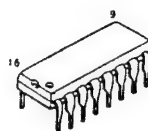
NE571N



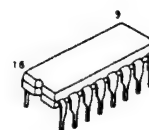
DTC124ES  
2SA1048  
2SA933S  
2SC1740S  
2SC2458



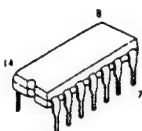
UN4212  
2SA1309A  
2SC3311A



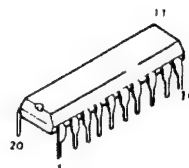
LA2730



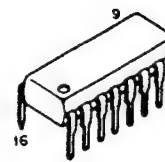
TC9213P  
TC9215P



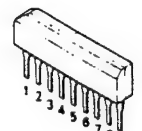
UPC4574C



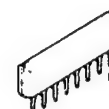
TDA7330A



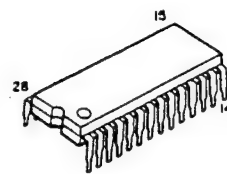
YM7128B



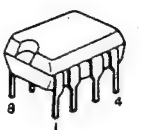
TA8409S



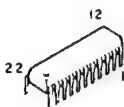
M5238AL



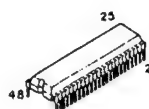
NJU7311L  
NJU7312L  
NJU7313L



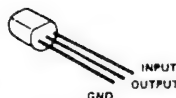
M5223P  
NJM4580D-D



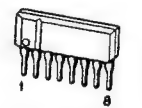
LA3401



SSM2126P



PST529C



NJM4565L

A or B: 8Ω or MORE



IMPEDANCE

(BYPASS ONLY)

A or B SP

B~16Ω

JUND OFF  
80 or MORE (80)

47.0V

-60.1V

E	Y. M. X. T
2-72	0-22
NO	YES
100K	47K
1.22μ	0.1μ
YES	NO
YES	NO
NO	YES
NO	YES

T. E	Y. M. X
2-71	0-21
NO	NO
YES	YES
NO	NO
YES	YES

JT
(ON) OUT
15PIN
(IN) FROM
PLAY
2 (7PIN)
IDEO IPLAY
ID
CARE

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X13-720X-XX A/6

TO X14 CN3

TO X09 CN2

TO X14 CN2

TO X09 CN1

TO X09 WH6

TO X09 WH5

TO X09 WH5

TO X09 WH5

TO X09 WH5

TO X09 WH5

TO X09 WH5

TO X09 WH5

TO X09 WH5

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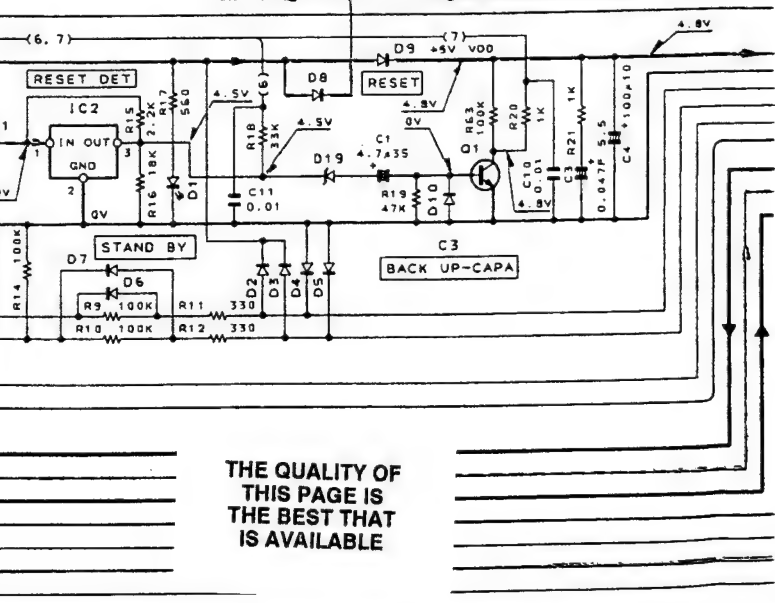
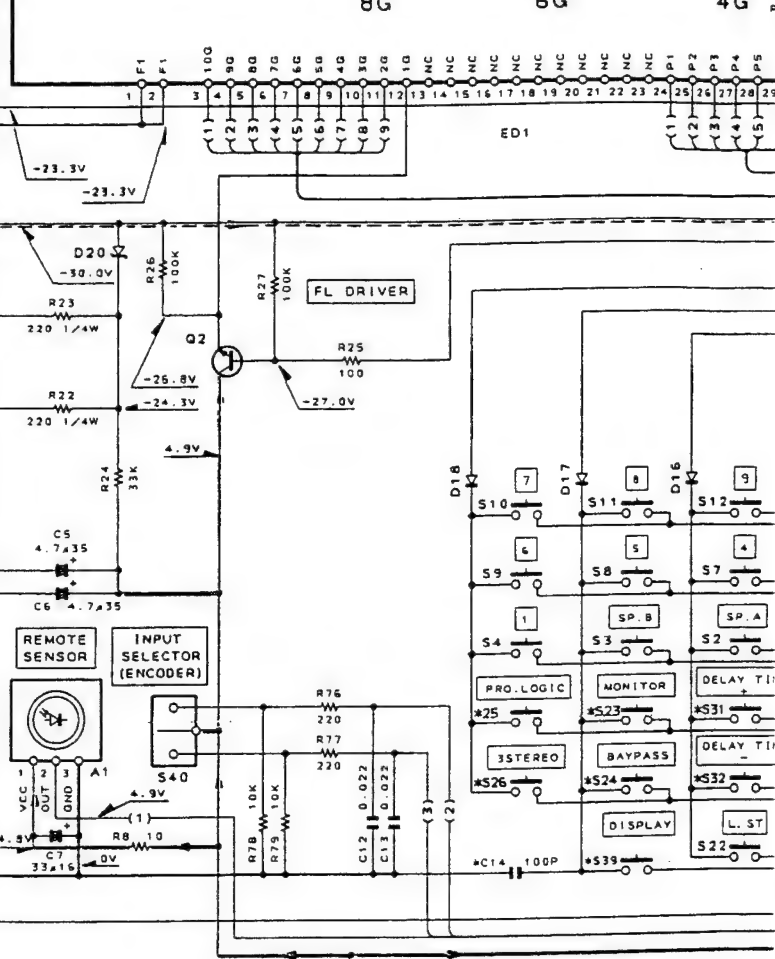
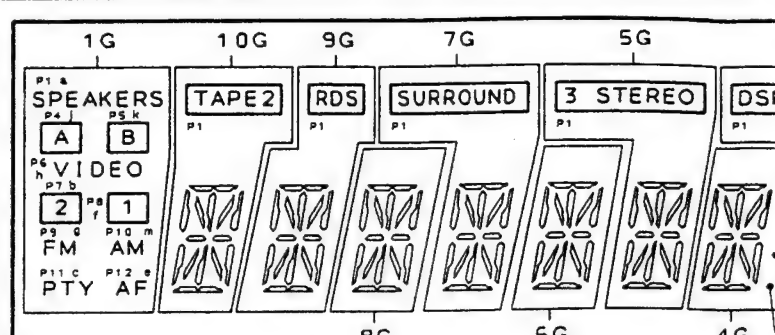
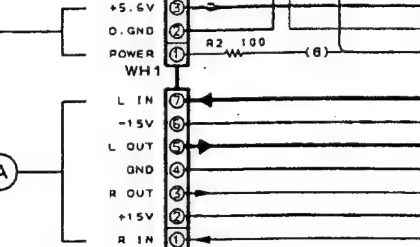
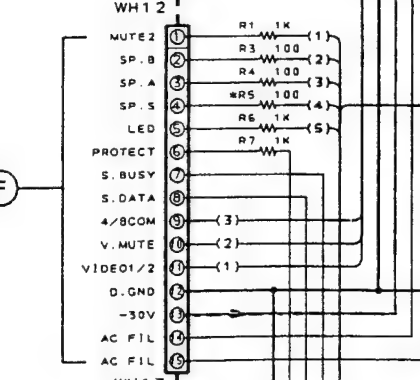
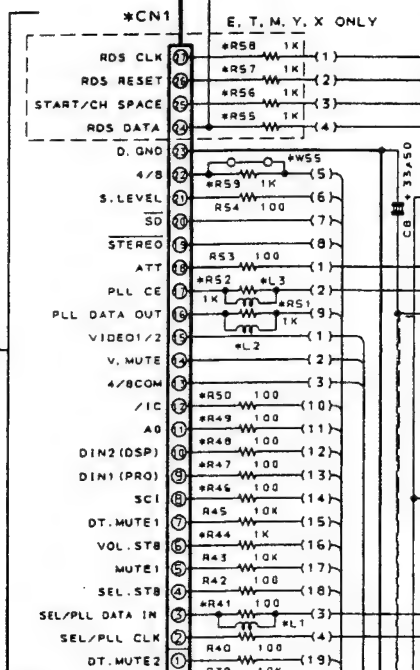
TO X09 WH5

TO X09 WH5

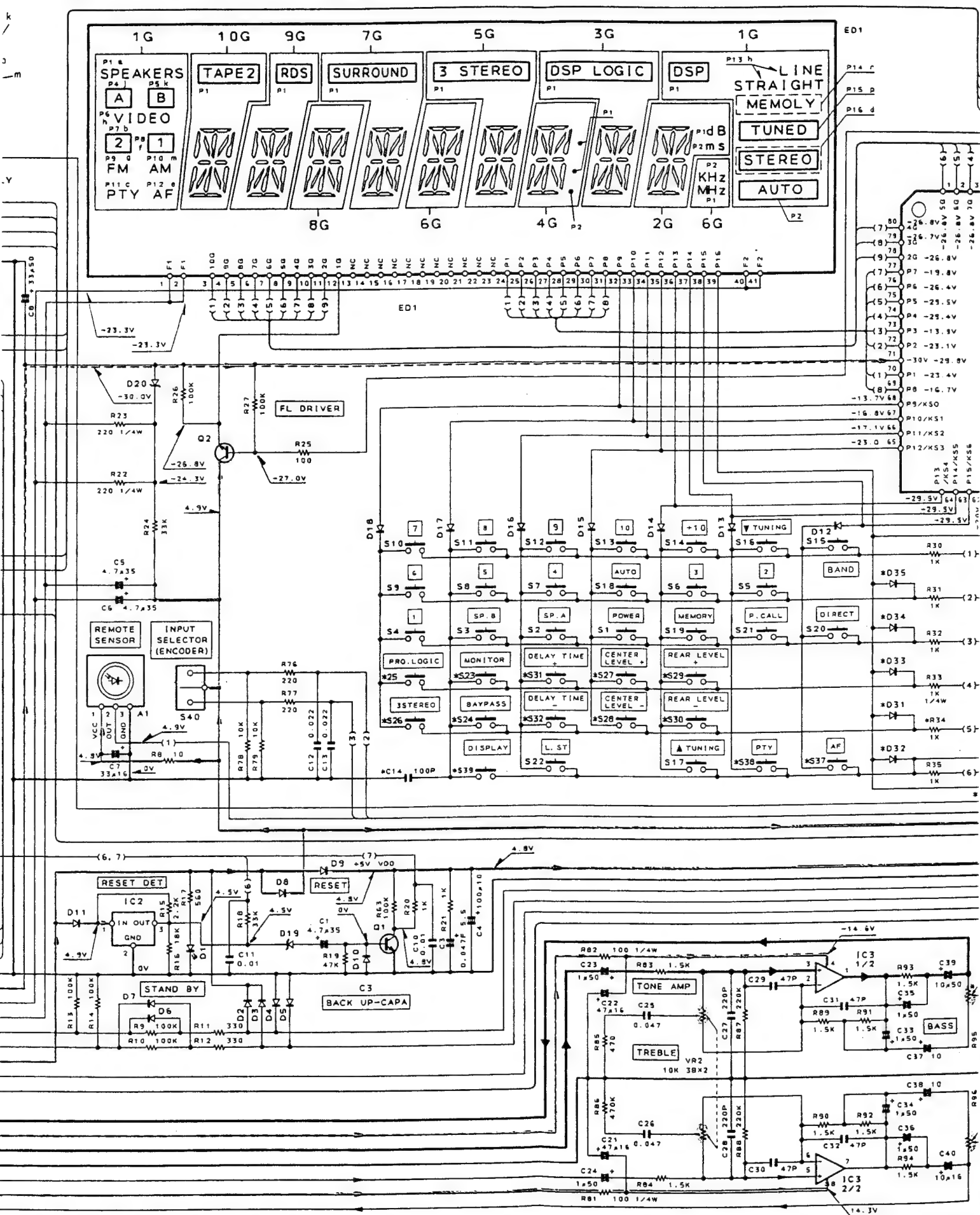
TO X09 WH5

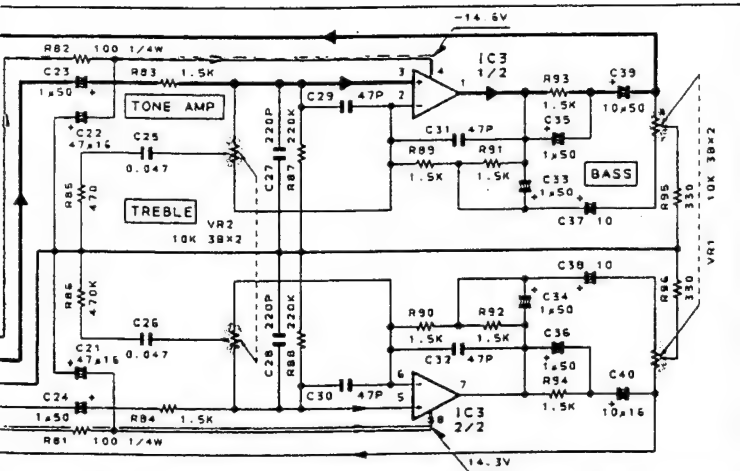
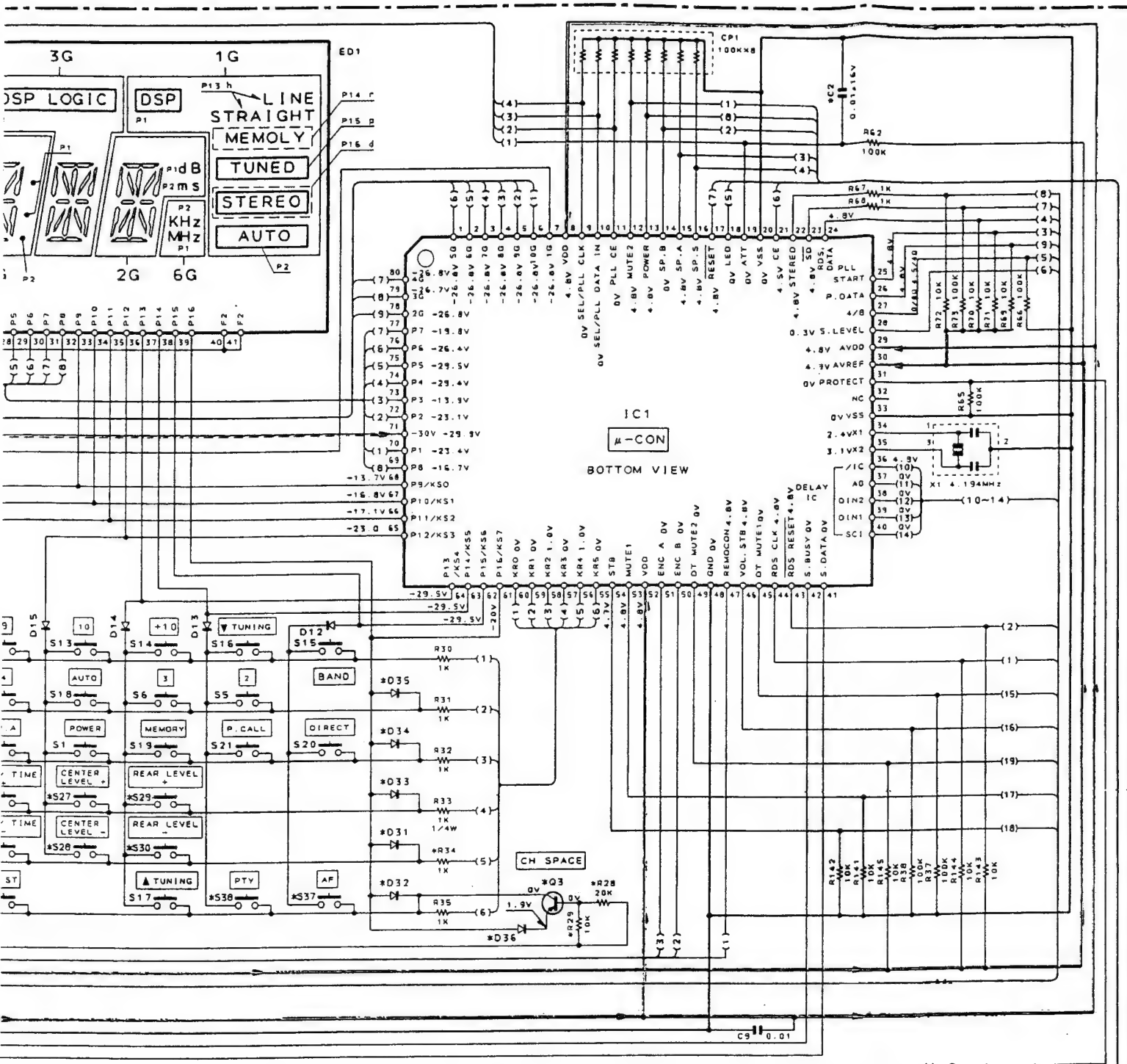
TO X09 WH5

TO X09 WH5



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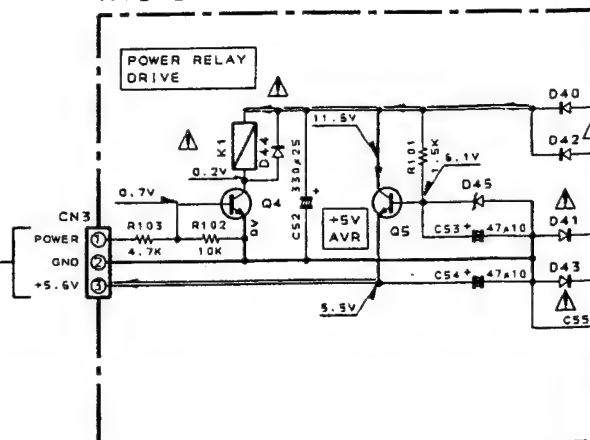
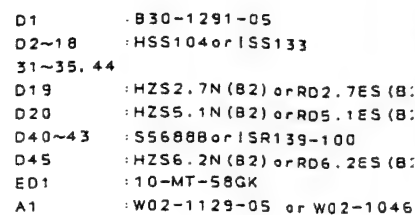
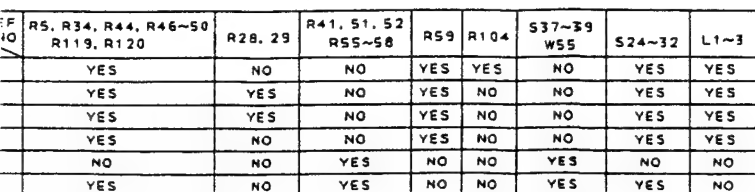


X13 A/6

ABB	UNIT	REF NO	Q3	D31	D32	D33	D36	D34	D35	C2, C14
K, P	0-10		NO	YES	NO	NO	NO	YES	NO	NO
M	0-21		YES	NO	NO	NO	YES	YES	NO	NO
Y	2-91		YES	NO	NO	NO	YES	YES	NO	NO
X	0-71		NO	NO	YES	NO	NO	YES	NO	NO
E	2-71		NO	NO	YES	YES	NO	NO	YES	YES
T	0-51		NO	NO	YES	YES	NO	YES	NO	YES

X13 A/6

ABB	UNIT	REF NO	R5, R34, R44, R46~50 R119, R120	R28, 29	R41, S1, S2 R55~58	R59	R104	S37~39 W55	S
K, P	0-10		YES	NO	NO	YES	YES	NO	
M	0-21		YES	YES	NO	YES	NO	NO	
Y	2-91		YES	YES	NO	YES	NO	NO	
X	0-71		YES	NO	NO	YES	NO	NO	
E	2-71		NO	NO	YES	NO	NO	YES	
T	0-51		YES	NO	YES	NO	NO	YES	



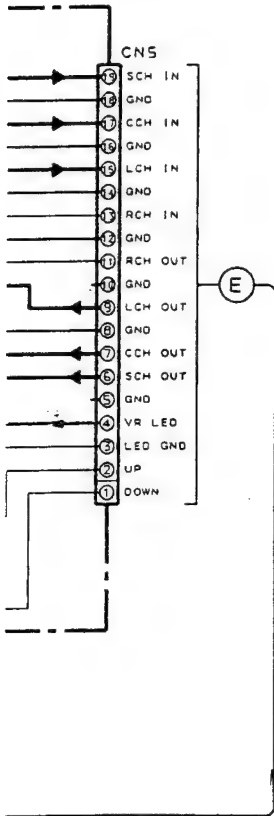


X13-720X-XX

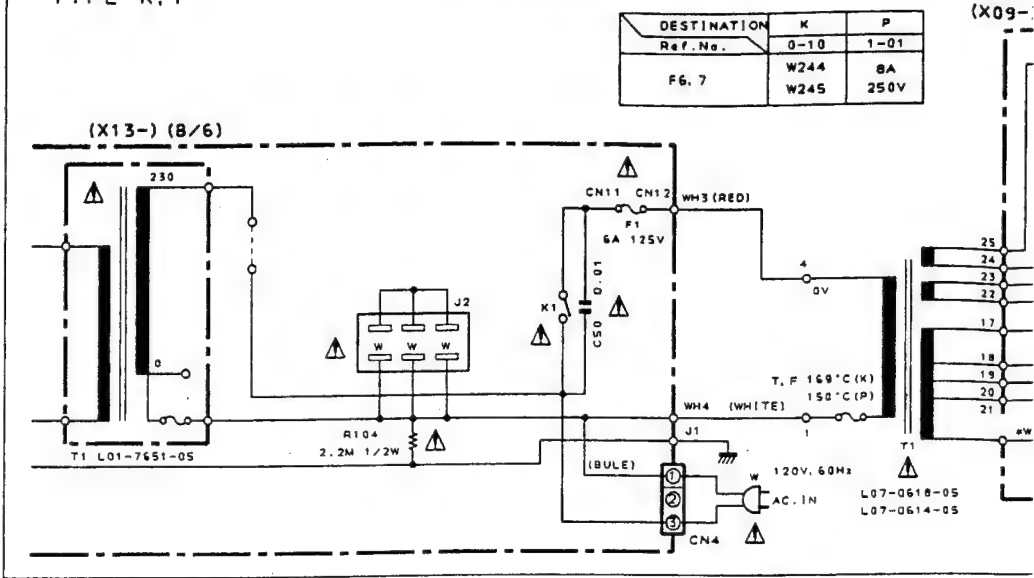
IC1 : #PD78044GF-021  
 IC2 : PST529C  
 IC3 : NJM4565L

Q1, 2 : 2SC1740S (Q, R) or 2SC2785 (F, E)  
 Q3 : 2SA933S (Q, R) or 2SA1175 (F, E)  
 Q4 : 2SC2083 (L, K)  
 Q5 : 2SC3940A (R, S)

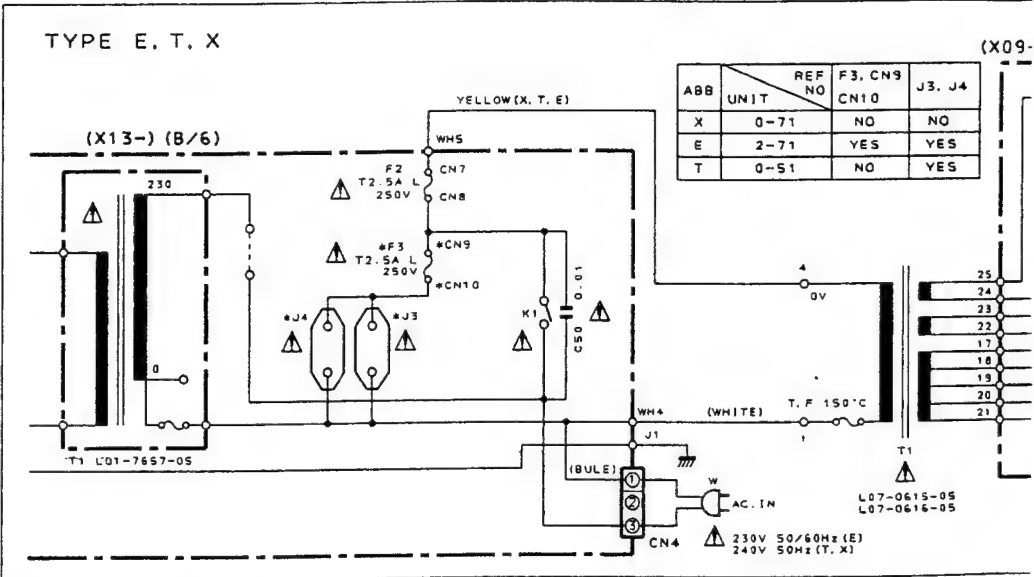
D1 : B30-1291-05  
 D2~18 : HSS104 or ISS133  
 31~35, 44 :  
 D19 : HZS2.7N (B2) or RD2.7ES (B2)  
 D20 : HZS5.1N (B2) or RD5.1ES (B2)  
 D40~43 : S5688 or ISR139-100  
 D45 : HZS6.2N (B2) or RD6.2ES (B2)  
 ED1 : 10-MT-58GK  
 A1 : W02-1129-05 or W02-1046-05



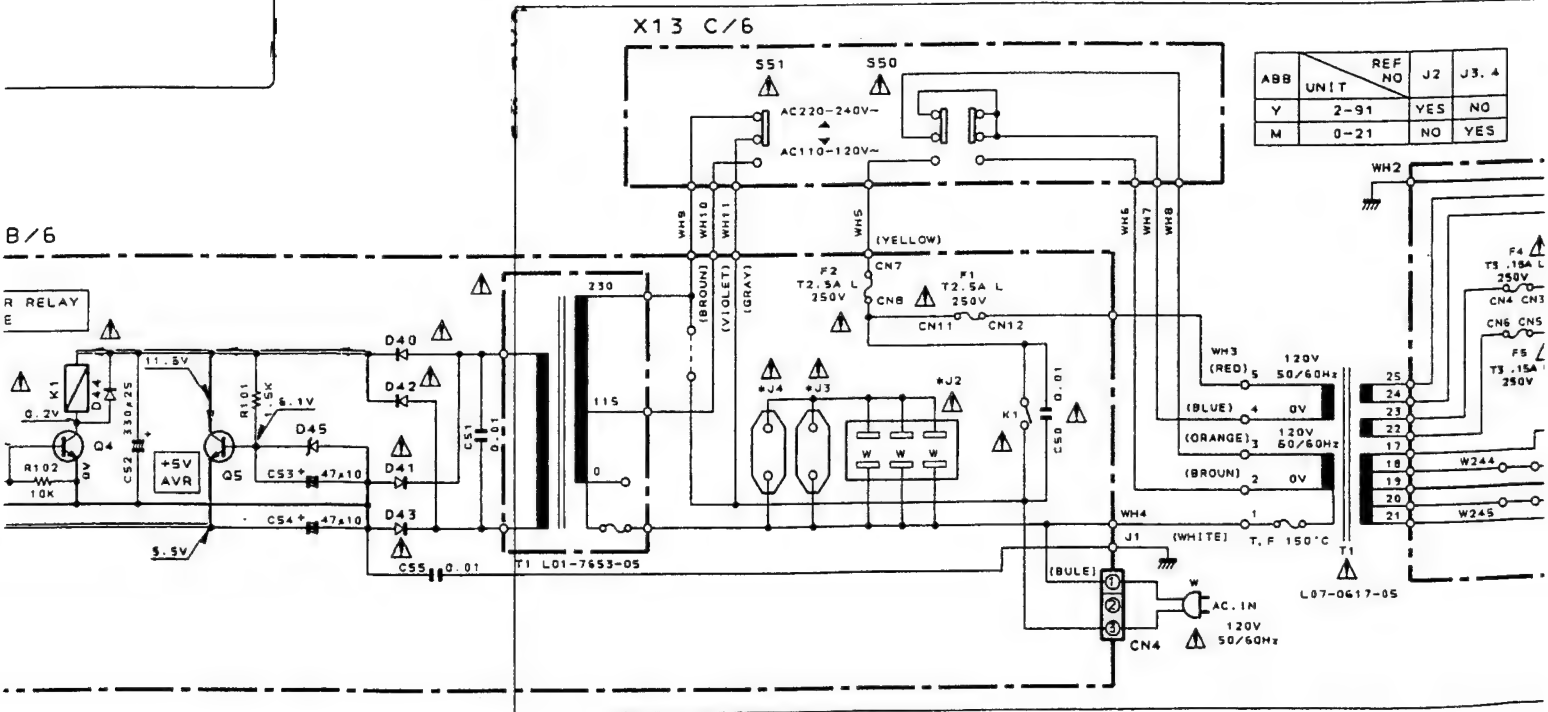
TYPE K, P

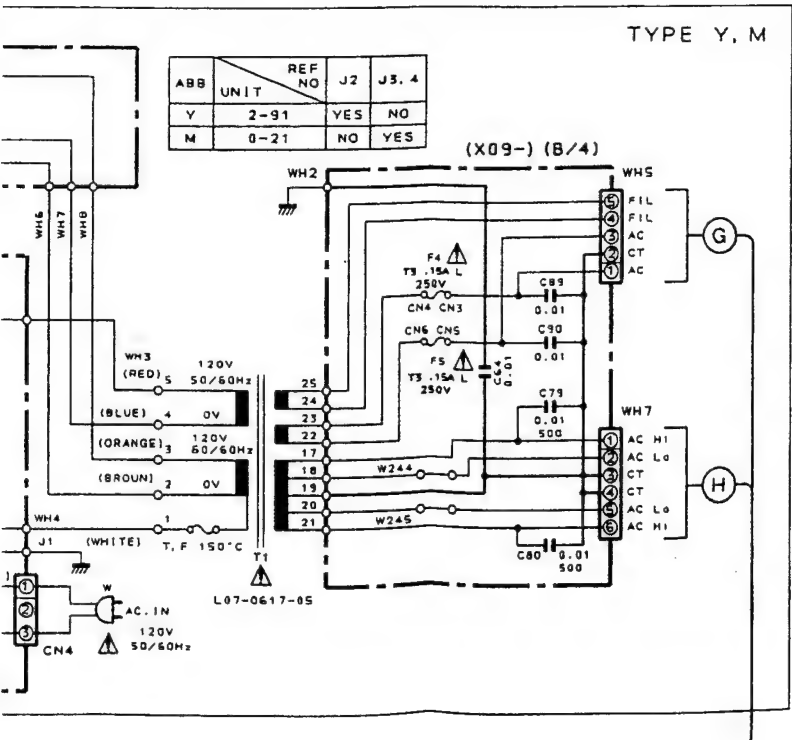
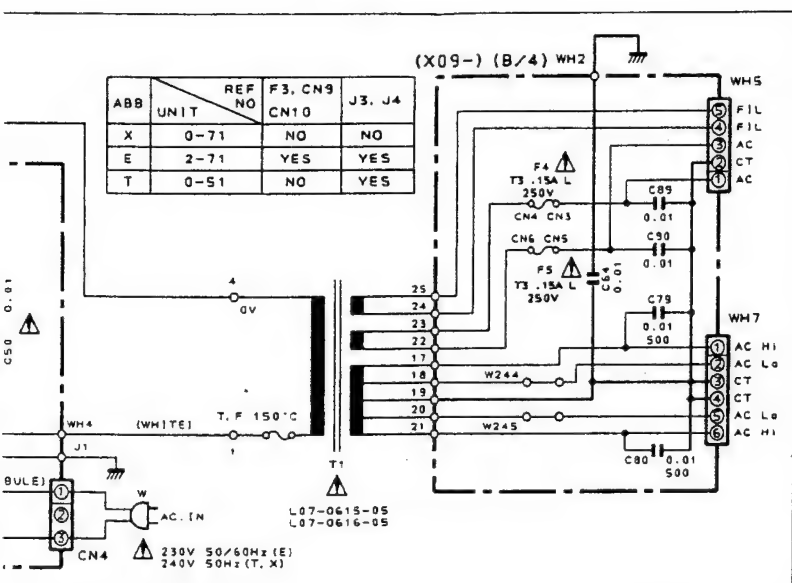
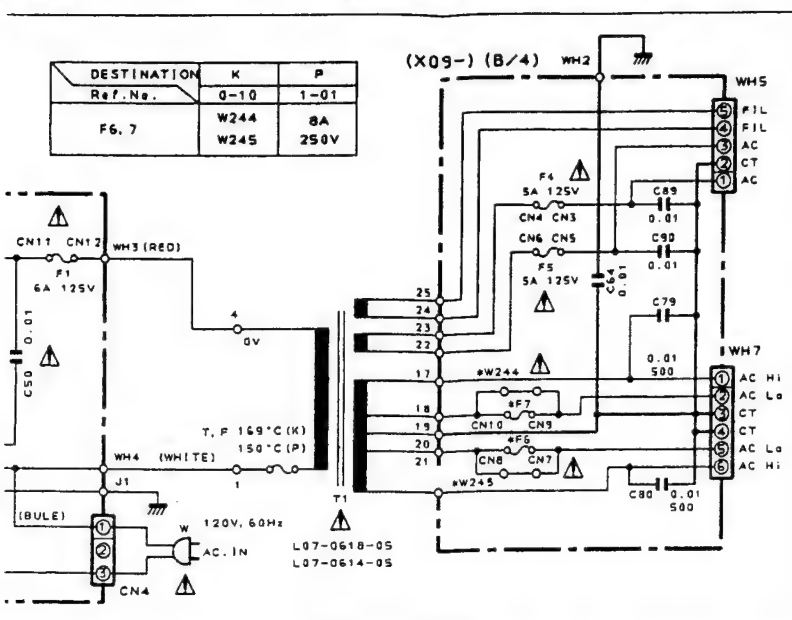


TYPE E, T, X



X13 C/6





DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

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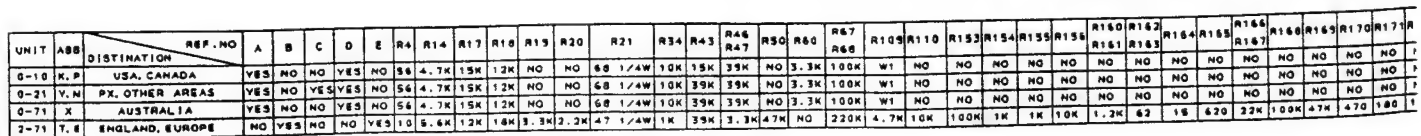
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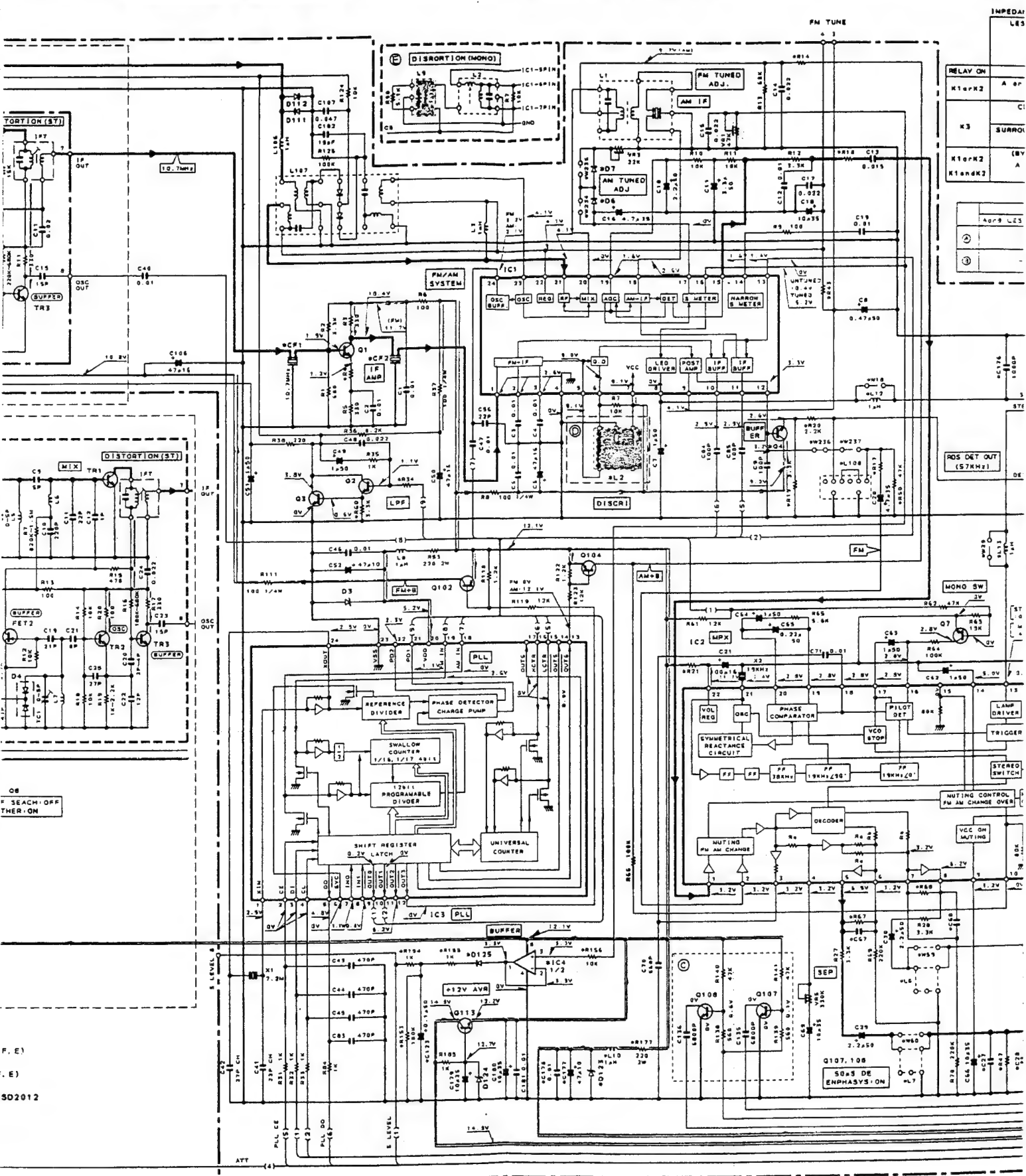
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— SIGNAL LINE  
— GND LINE  
— +B LINE  
- - -B LINE

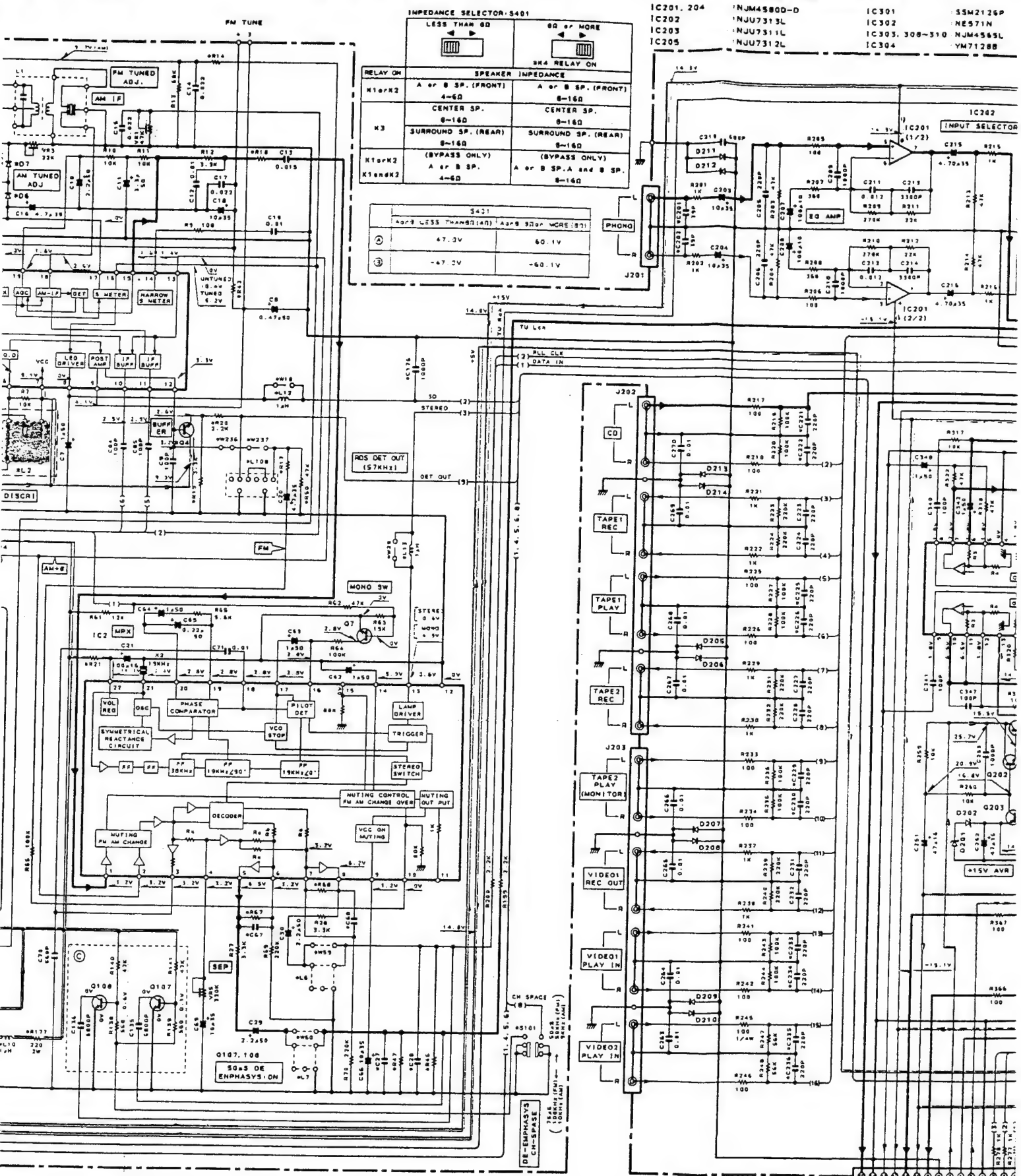


6



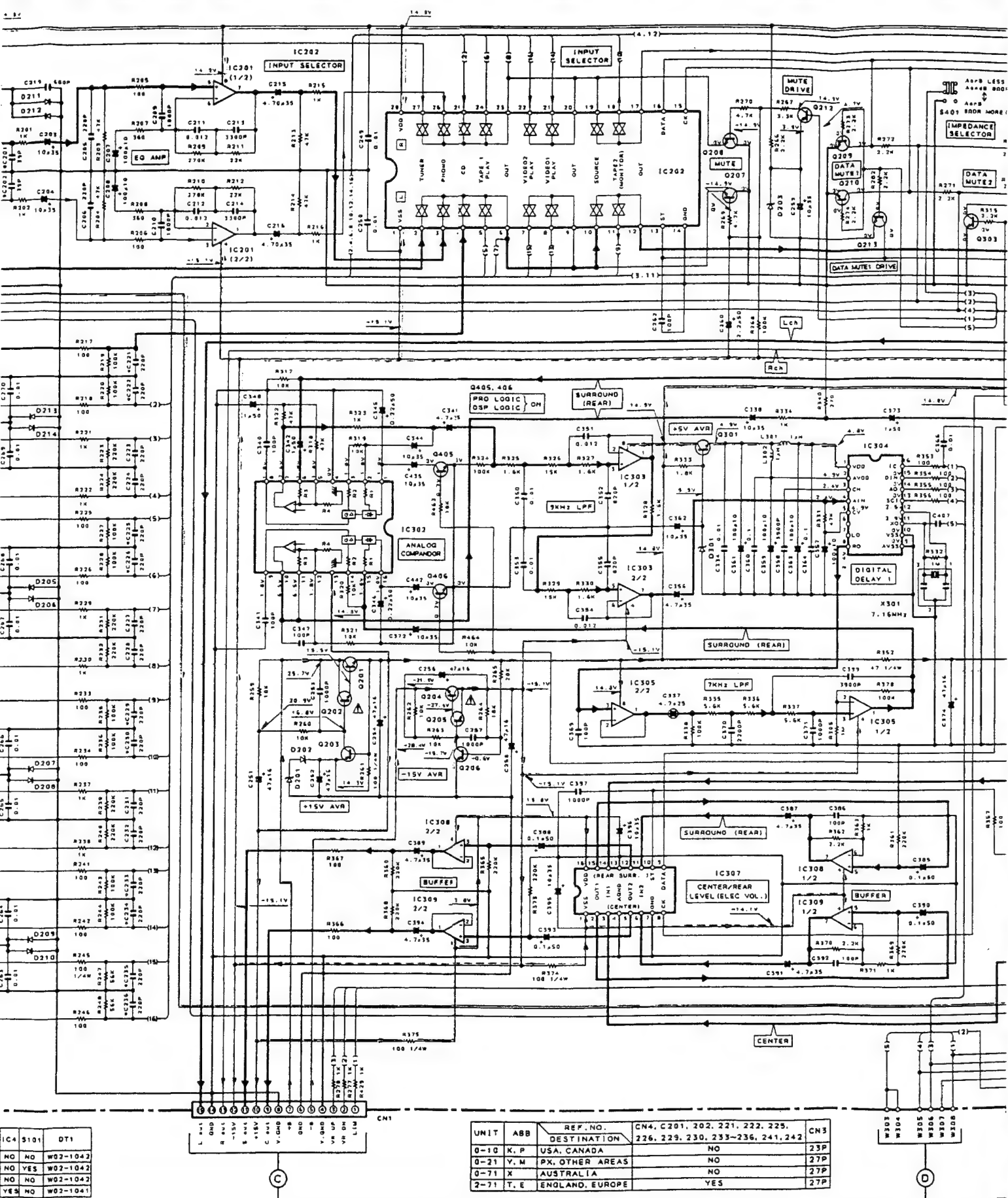


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C87	C123	C172	C173	C174	C177	C178	L2	L6	L7	L9	L10	L12	L13	L108	Q4.0	Q107.108	Q6.7	D117-121.125	D123	CF1.2	IC4	3101	DT1
100P	NO	NO	NO	1000P	NO	NO	L30-0439	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	L72-0531	NO	NO	W02-1042
100P	NO	NO	NO	1000P	NO	NO	L30-0494	NO	NO	NO	NO	YES	YES	NO	NO	YES	NO	NO	NO	L72-0531	NO	YES	W02-1042
100P	NO	NO	NO	1000P	NO	NO	L30-0494	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	L72-0531	NO	NO	W02-1042
2200P	0.1	33P	1000P	NO	47x10	0.01	L30-0484	YES	L30-0485	YES	W18	W29	YES	YES	NO	YES	YES	YES	YES	L72-0534	YES	NO	W02-1041

204	NJM45800-D	IC301	SSM2126P	IC305	MS238AL	Q201, 204	2S02061 or 2S02012 or 2SD2374	Q205, 206, 212
	NJU7313L	IC302	NE571N	IC306	LA2730	Q202, 203, 209	25C17405 (Q, R) or 25C2458 (Y, GR) or	
	NJU7311L	IC303, 308-310	NJM4565L	IC307	TC9215P	210, 213, 303	25C2785 (P, E) or 25C3311A (Q, R)	Q207, 208,
	NJU7312L	IC304	YM7120B			304, 306		Q211, 301



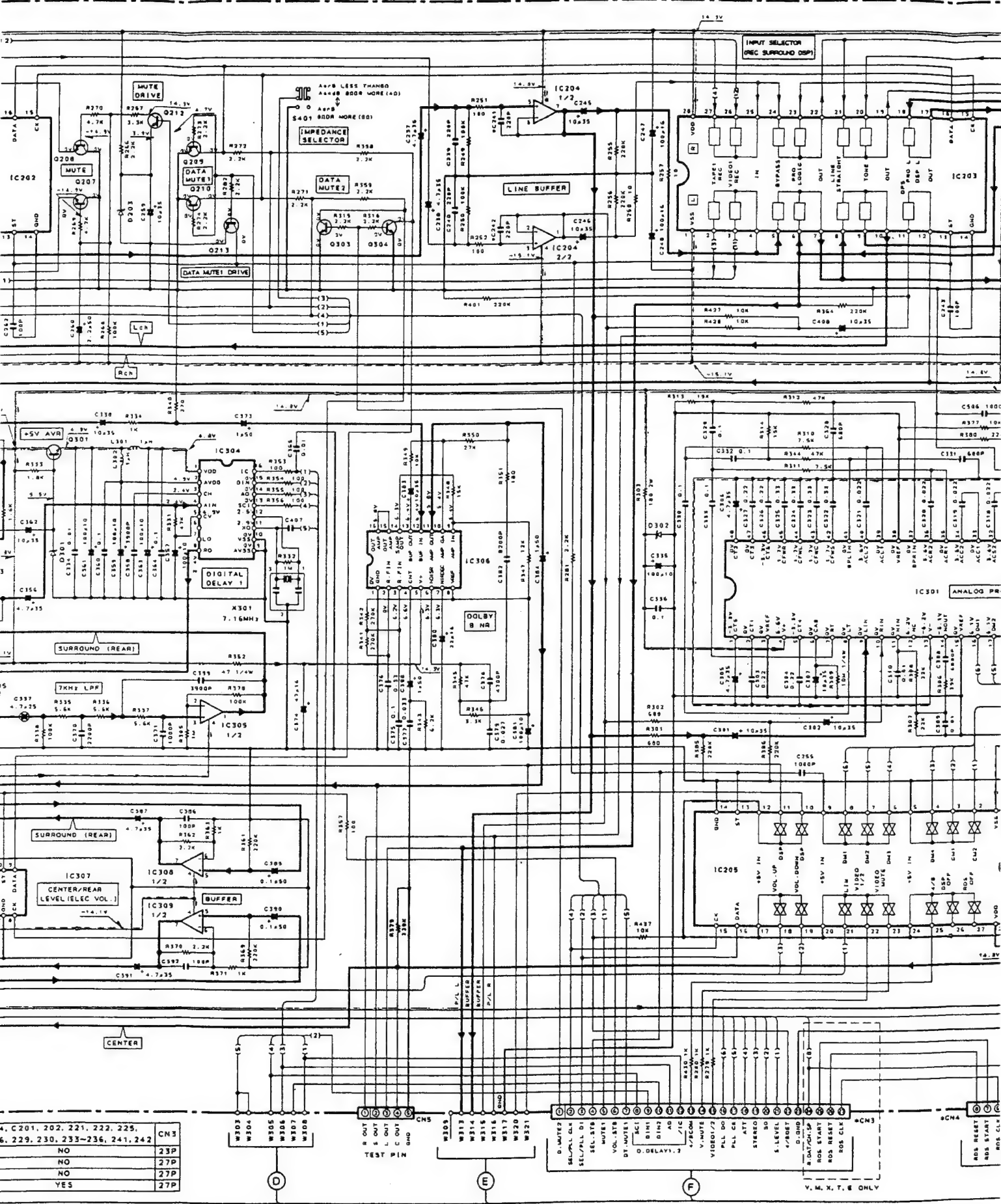
IC4	S101	DT1
NO	NO	W02-1042
NO	YES	W02-1042
NO	NO	W02-1042
YES	NO	W02-1041

UNIT	ABB	REF. NO. DESTINATION	CN4, C201, 202, 221, 222, 225, 226, 229, 230, 233-236, 241, 242	CN3
0-10	K, P	USA, CANADA	NO	23P
0-21	V, M	PX, OTHER AREAS	NO	27P
0-71	X	AUSTRALIA	NO	27P
2-71	T, E	ENGLAND, EUROPE	YES	27P

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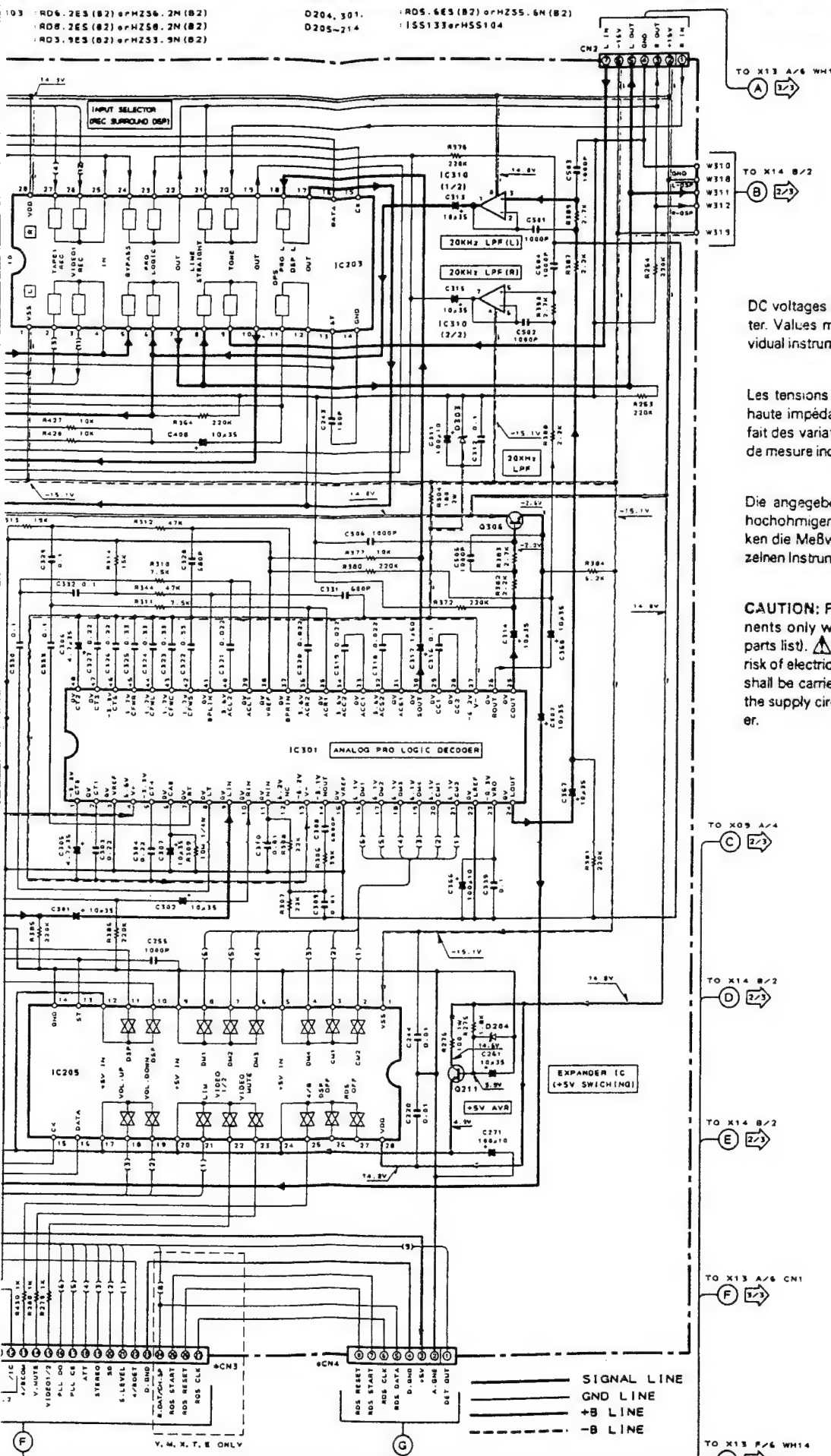
209 25C17405 (Q, R) or 25C2458 (Y, GR) or  
 303 25C2785 (P, E) or 25C3311A (Q, R)



103 RD6.2ES (B2) or HZ56.2N (B2)  
RD8.2ES (B2) or HZ56.2N (B2)  
RD3.9ES (B2) or HZ53.9N (B2)

D204, 301.  
D205-214

RD5.6ES (B2) or HZ55.6N (B2)  
ISS133 or HSS104



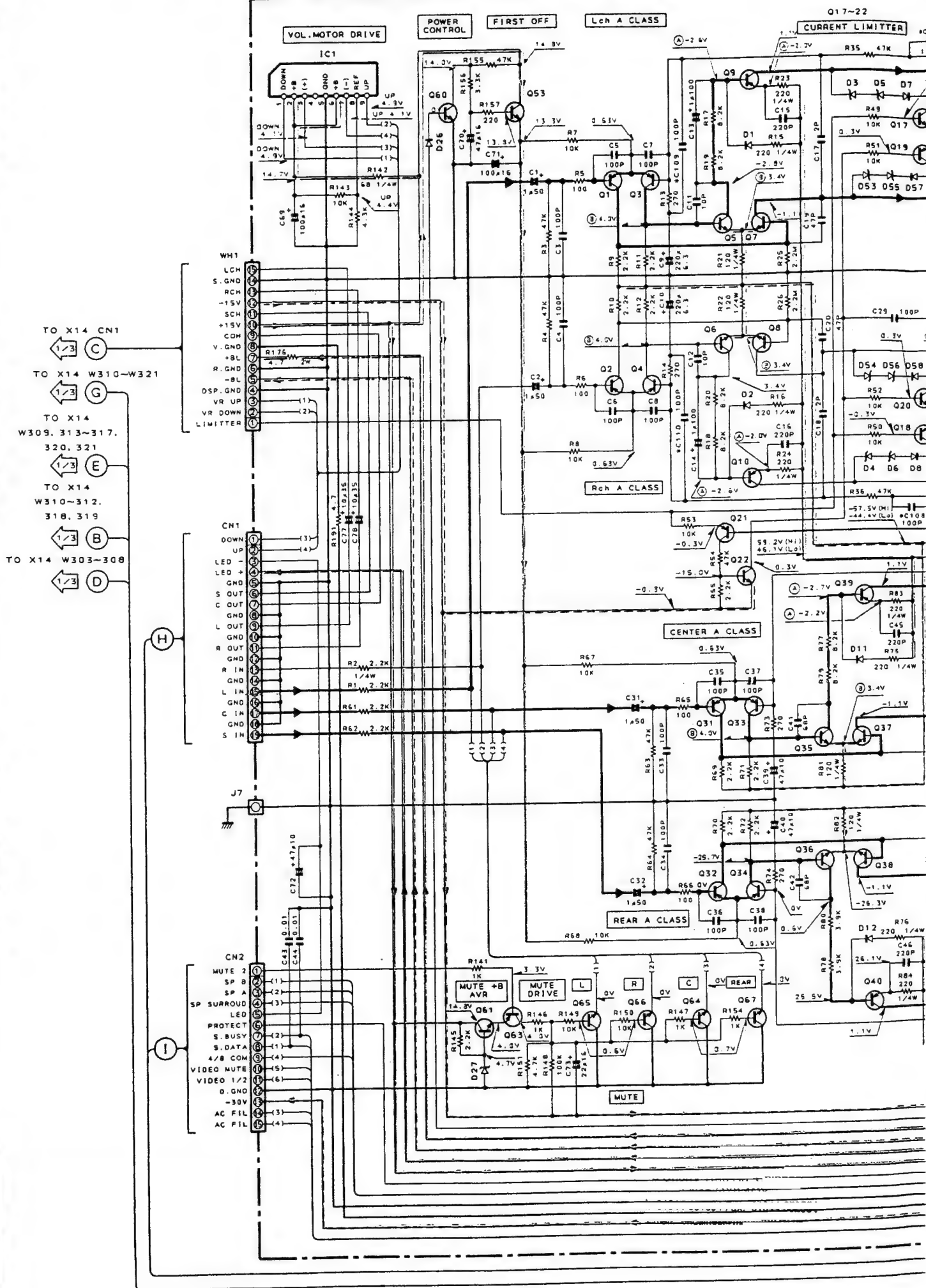
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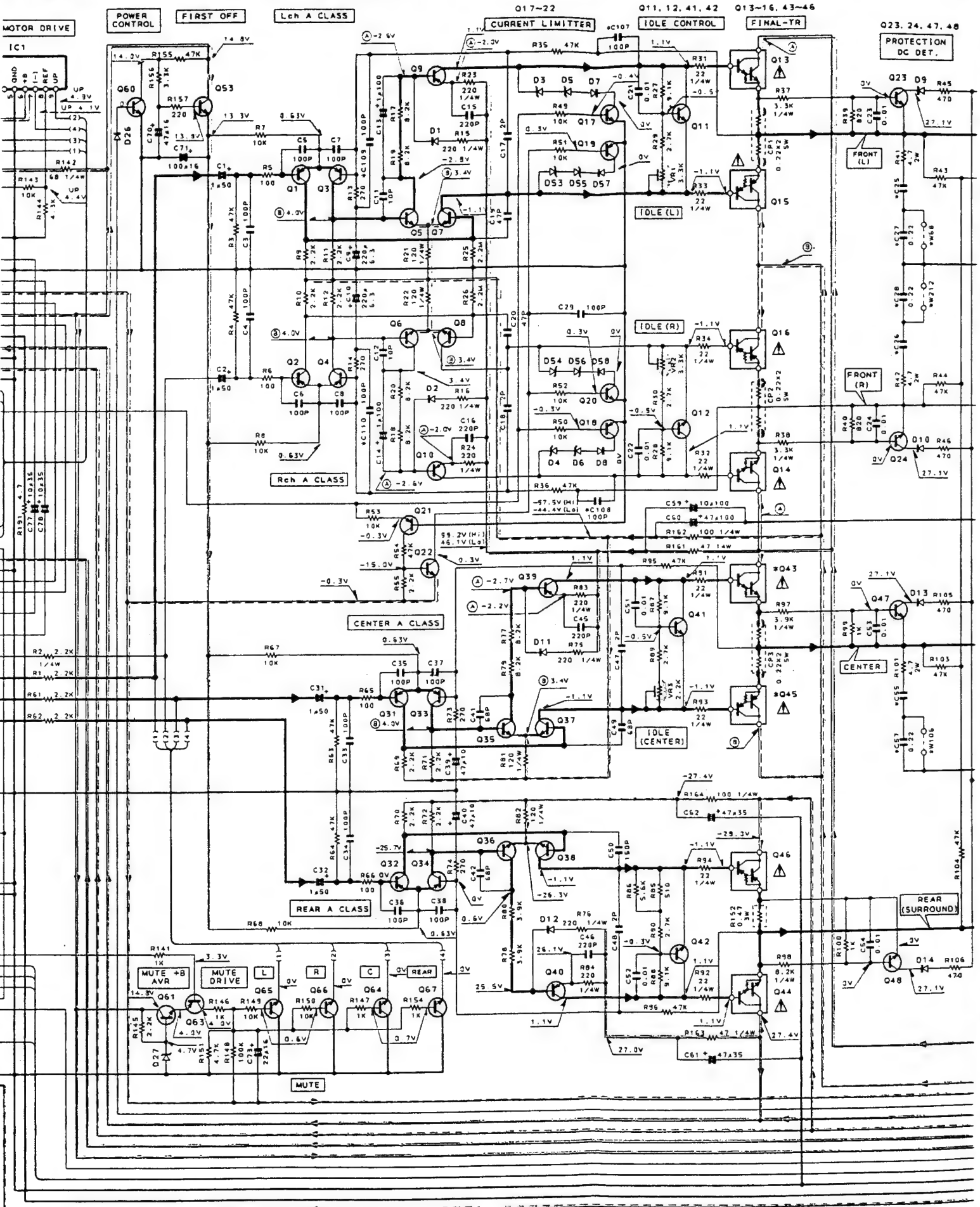
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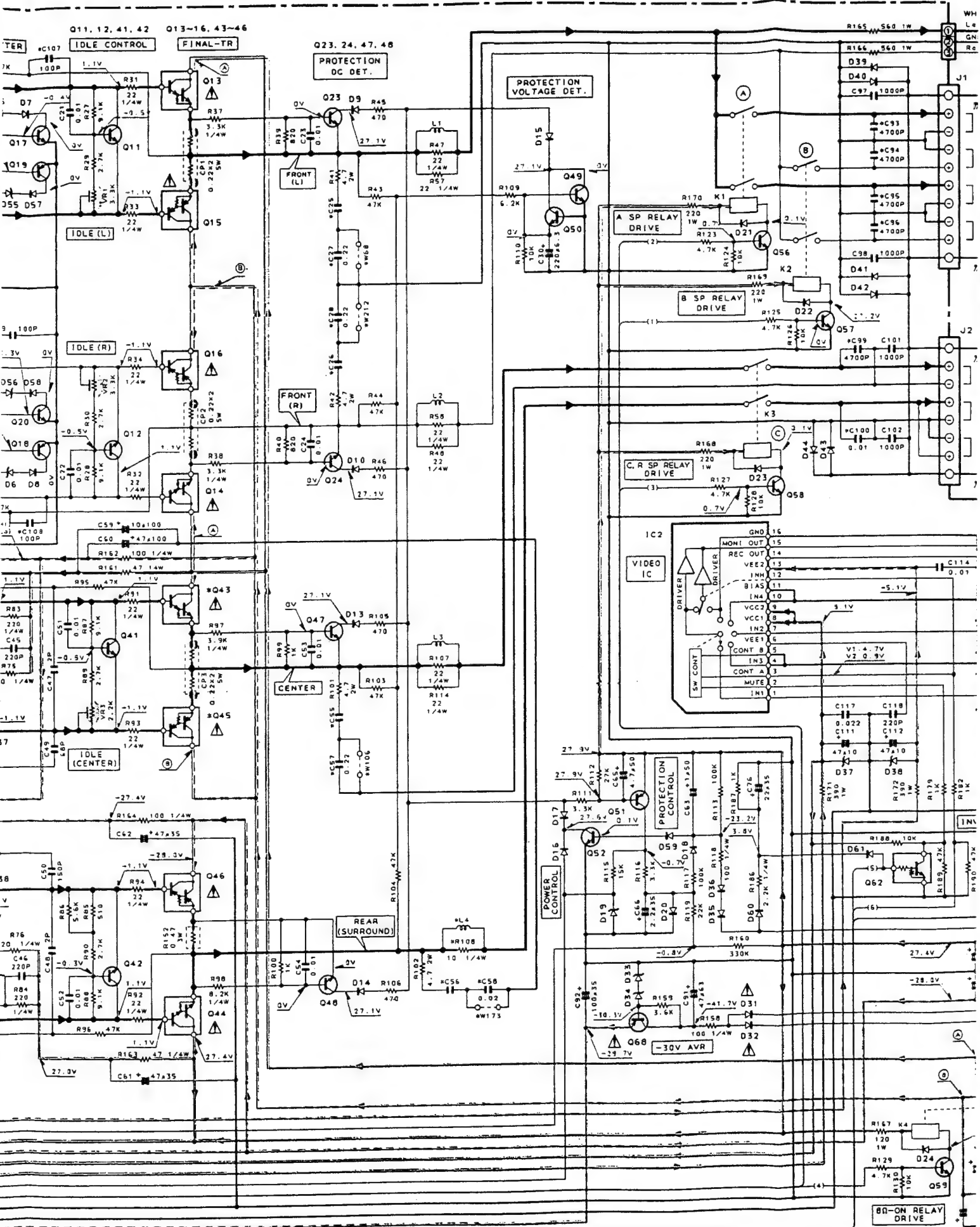
(X09-375X-XX) (A/4)

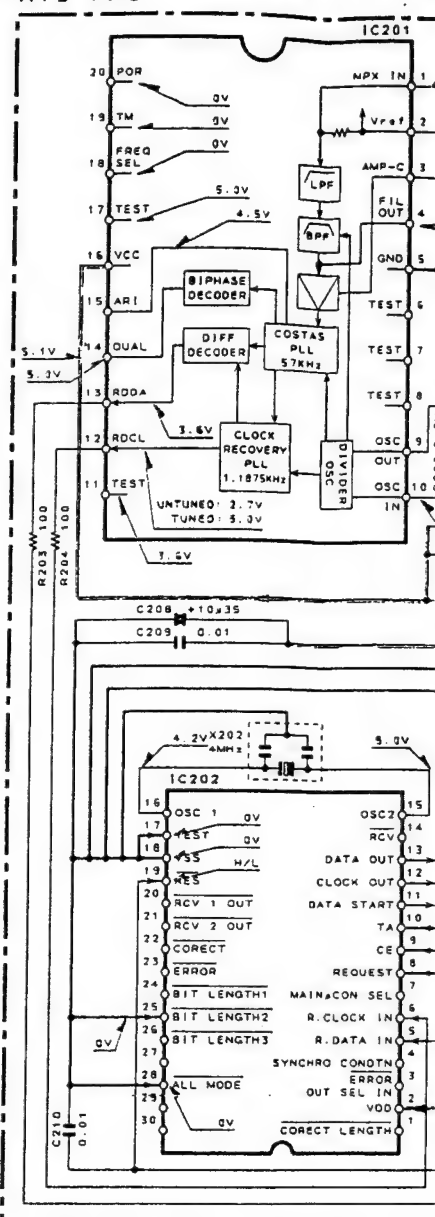
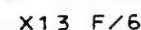


X-XX) (A/4)









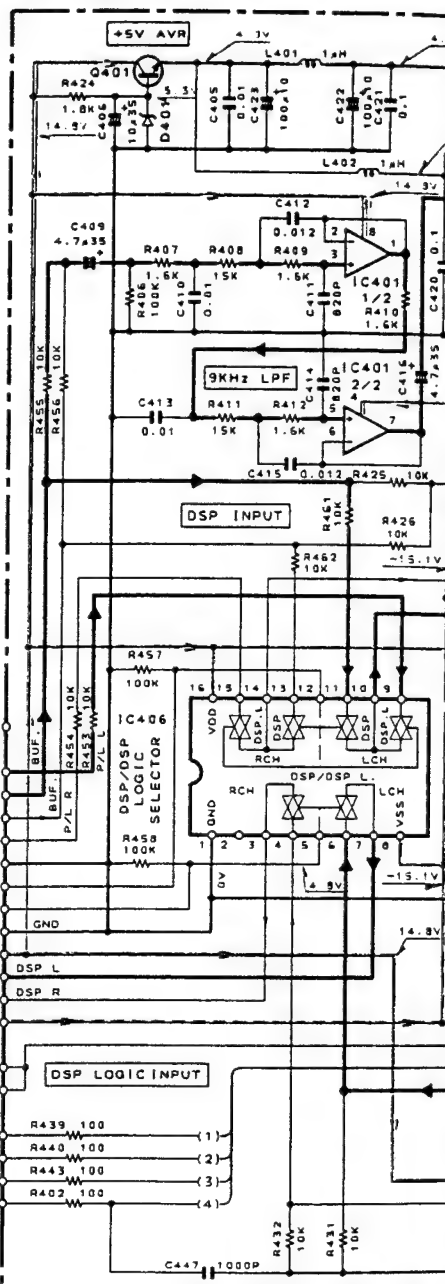
X09-375X-XX

IC1	:TA8409S
IC2	:CXA155BL

Q1~4, 19, 20, 31~34, 40, 51 : 2SA992 (F, E)  
Q5~8, 35, 37 : 2SC2631 (R, S)  
Q9, 10, 39 : 2SA1123 (R, S)  
Q11, 12, 41, 42 : 2SC4137F19 (V, W)  
Q13, 14 : 2SD2449LB or 2SD2449L  
Q15, 16 : 2SB1594LB or 2SB1594L  
Q17, 18, 23, 24, 36, 38, 47~50, 52 : 2SC1845 (F, E)  
Q21, 63 : 2SA933S (Q, R) or 2SA933S (Q, R) or 2SC1740S (Q, R) or 2SC1740S (Q, R)  
\*Q43 : 2SD2340BT  
Q44 : 2SD2340BT  
\*Q45 : 2SD2340BT  
Q46 : 2SB1531BT  
Q62 : UN4212 or DTC124  
Q64~67 : 2SC2878 (B)

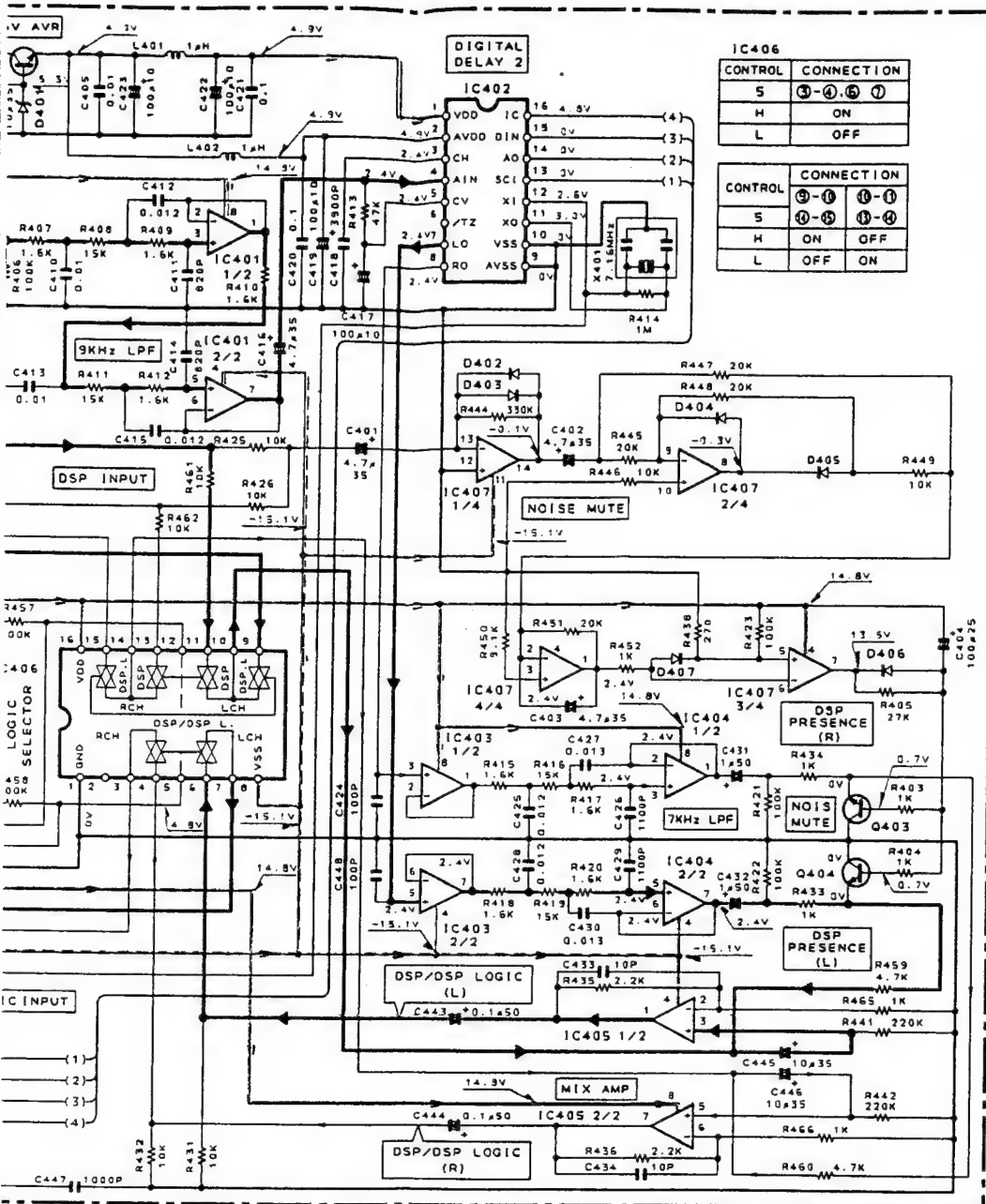
D1, 2, 7-18, 20-24,  
26, 35, 36, 57-61 : HSS104A or 1SS13  
D3, 4, 53, 54 : HZS11N (B2) or F  
D5, 6, 55, 56 : HZS13N (B2) or F  
D19, 25, 37, 38 : HZS5.1N (B2) or F  
D27 : HZS4.7N (B2) or F  
D28 : D3S8A20F03 or F  
D29, 30 : D5S8A20F03 or F  
D31, 32 : S5688B or 1SR13  
D33 : HZS15N (B2) or RC  
D34 : HZS16N (B2) or R  
D39-52 : HSS104 or 1SS13

## X14 B/2



D1, 2, 7~18, 20~24,  
26, 35, 36, 57~61 : H5S104A or 1SS131  
D3, 4, 53, 54 : HZS11N (B2) or RD11ES (B2)  
D5, 6, 55, 56 : HZS13N (B2) or RD13ES (B2)  
D19, 25, 37, 38 : HZS5.1N (B2) or RD5.1ES (B2)  
D27 : HZS4.7N (B2) or RD4.7ES (B2)  
D28 : D3SBA20F03 or RBV-402LFA  
D29, 30 : D5SBA20F03 or RBV-602LFA  
D31, 32 : S5688B or 1SR139-100  
D33 : HZS15N (B2) or RD15ES (B2)  
D34 : HZS16N (B2) or RD16ES (B2)  
D39~52 : H5S104 or 1SS133

DESTINATION	K	P	T. E	V. M. X
Ref. No.	0-10	1-01	2-71	0-21
*Q43				
2SD2255BT	YES	NO	NO	NO
2SD2255BY#1				
2SD2384LB	NO	YES	YES	YES
*Q45				
25B1493BT	YES	NO	NO	NO
25B1493BT#1				
25B1555LB	NO	YES	YES	YES



X14 B/2

IC401 : NJM4565L  
 IC402 : YM71288  
 IC403 : M5238AL  
 IC404, 405 : NJM4565L  
 IC406 : TC9215P  
 IC407 :  $\mu$ PC4574C

D401 : HZS5.6N (B2) or  
 RDS.6ES (B2)

D402-407 : ISS133 or  
 HSS104

Q401 : 2SC2003 (L, K)

Q403, 404 : 2SC2878 (B)

TO X13 CN5

TO X13 WH12

TO X13 WH5

TO X13 WH7

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Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  Indicates safety critical components. To reduce the risk of electric shock, leakage current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

— SIGNAL LINE  
 — GND LINE  
 — +B LINE  
 — -B LINE

2/3

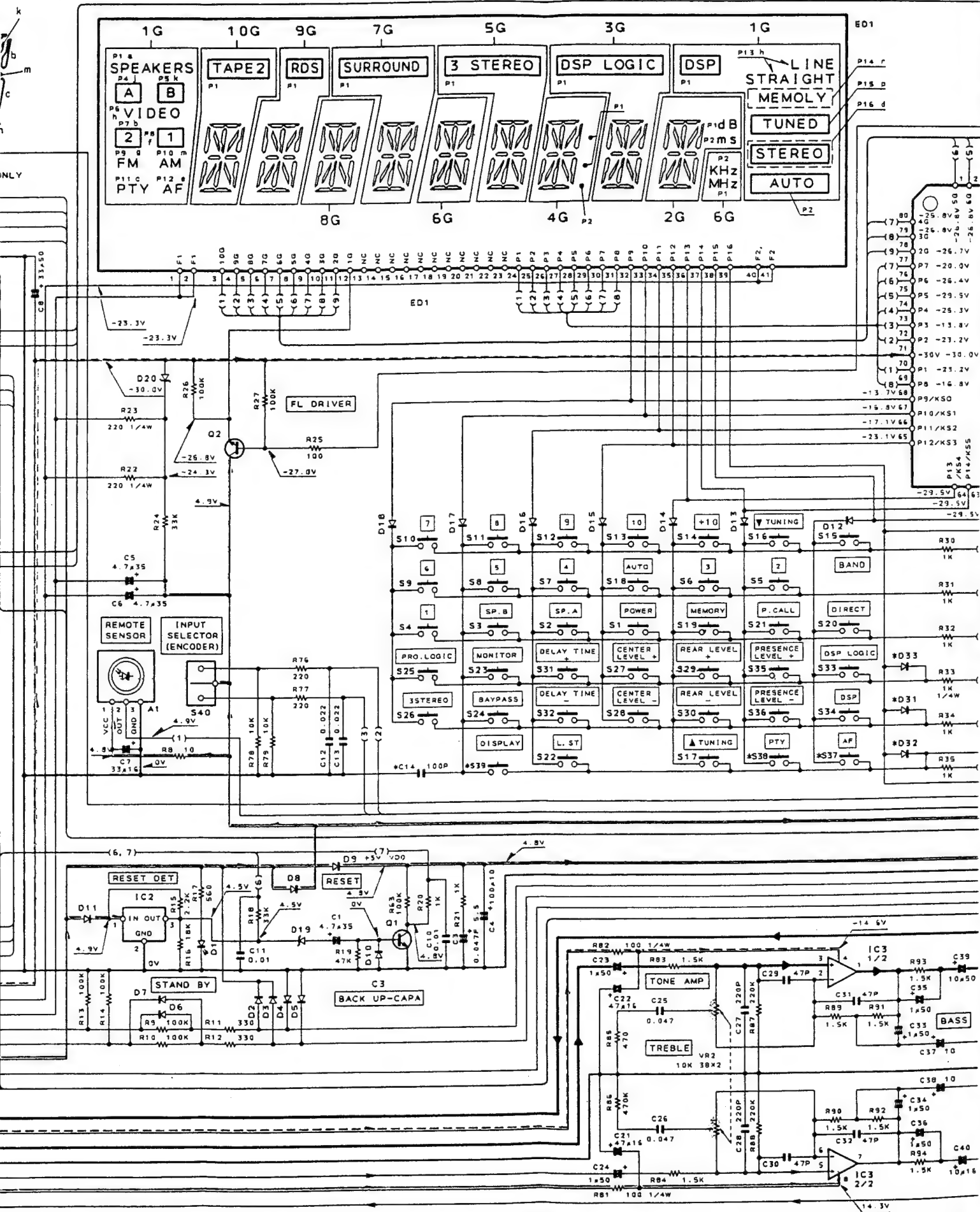
KR-V7050

KENWOOD

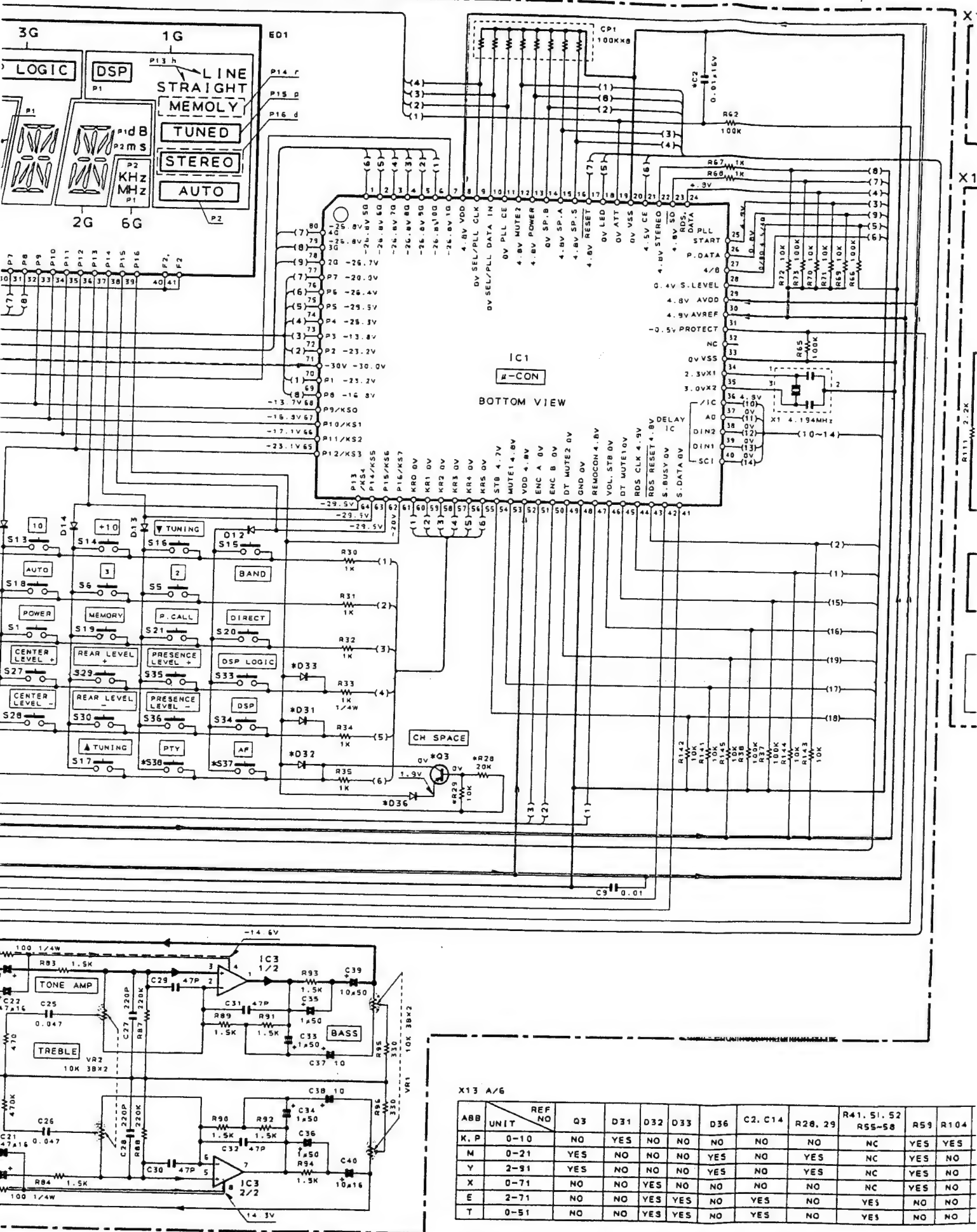
A detailed diagram of a single unit of a myofibril. It shows thick filaments (labeled a, c, e, g, i, k, m, o, q, s, u, w, y) and thin filaments (labeled b, d, f, h, j, l, n, p, r, t, v, x, z). The diagram illustrates the arrangement of these filaments and the various lines and bands within the myofibril, such as the Z-line, A-band, I-band, and H-band. Labels a through z are used to identify specific components and regions.

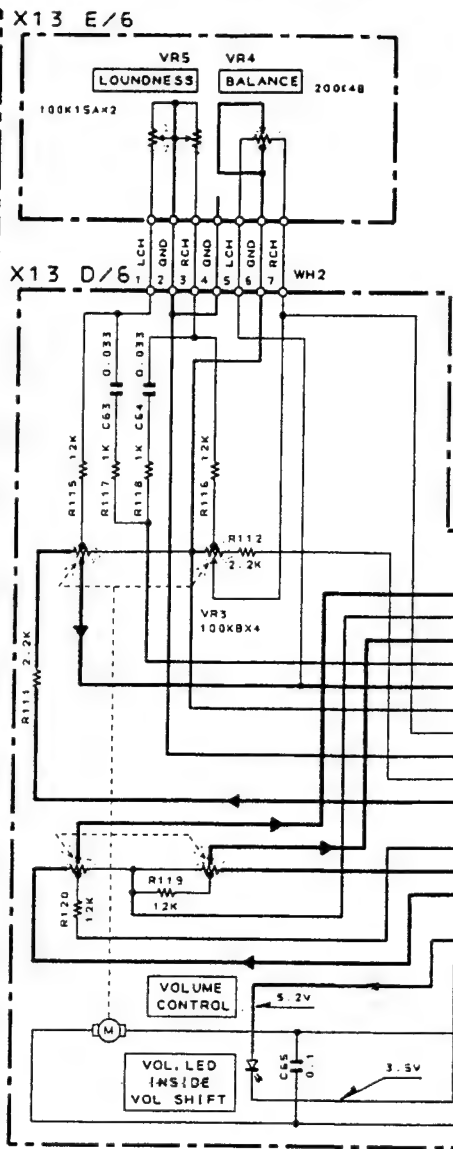
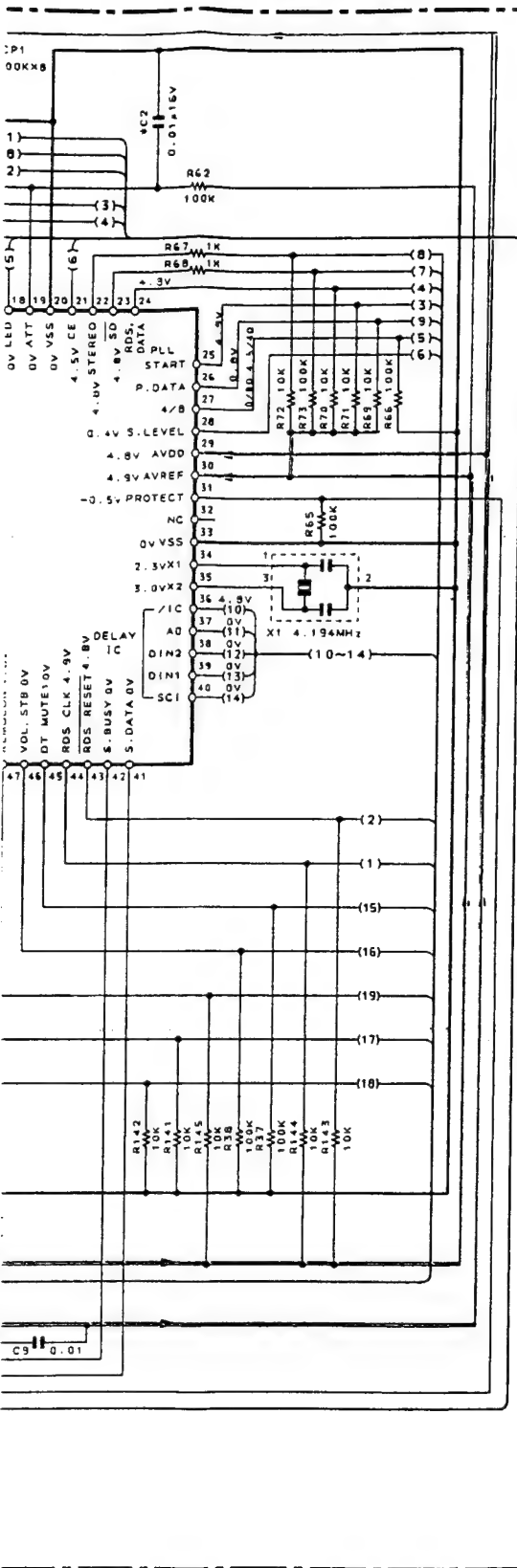






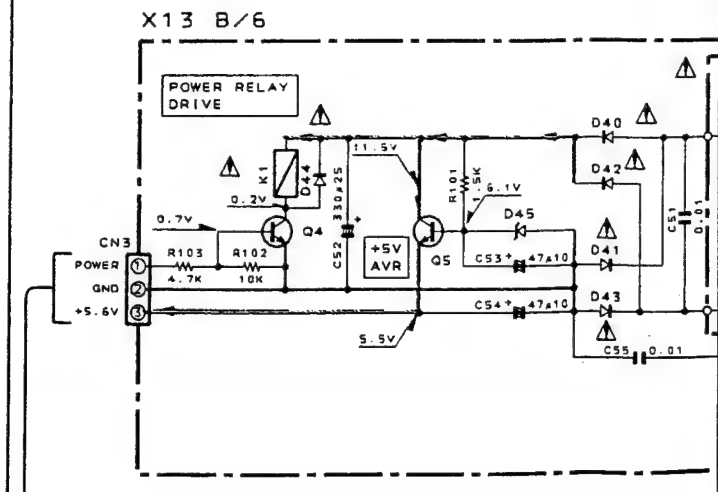






- X13-719X-XX
- IC1 : PD78044GF-021  
IC2 : PST529C  
IC3 : NJM4565L
- Q1, 2 : 2SC1740S (Q, R) or 2SC2785 (F, E)  
Q3 : 2SA933S (Q, R) or 2SA1175 (F, E)  
Q4 : 2SC2003 (L, K)  
Q5 : 2SC3940A (R, S)  
D1 : B30-1291-05  
D2~18 : HSS104 or ISS133  
31~35, 44
- D19 : HZS2.7N (B2) or RD2.7ES (B2)  
D20 : HZS5.1N (B2) or RD5.1ES (B2)  
D40~43 : S56888 or ISR139-100  
D45 : HZS6.2N (B2) or RD6.2ES (B2)  
ED1 : 10-MT-58GK  
A1 : W02-1129-05 or W02-1046-05

D31	D32	D33	D36	C2, C14	R28, 29	R41, 51, 52 R55-58	R59	R104	S37~39 W55	L1~3
YES	NO	NO	NO	NO	NO	NC	YES	YES	NO	YES
NO	NO	NO	YES	NO	YES	NC	YES	NO	NO	YES
NO	NO	NO	YES	NO	YES	NC	YES	NO	NO	YES
NO	YES	NO	NO	NO	NO	NC	YES	NO	NO	YES
NO	YES	YES	NO	YES	NO	YES	NO	NO	YES	NO
NO	YES	YES	NO	YES	NO	YES	NO	NO	YES	NO



## X13-719X-XX

IC1 : PD78044GF-021

IC2 : PST529C

IC3 : NJM4565L

Q1, 2 : 2SC1740S (Q, R) or 2SC2785 (F, E)

Q3 : 2SA933S (Q, R) or 2SA1175 (F, E)

Q4 : 2SC2003 (L, K)

Q5 : 2SC3940A (R, S)

D1 : B30-1291-05

D2~18 : HSS104 or ISS133

31~35, 44

D19 : HZS2.7N (B2) or RD2.7ES (B2)

D20 : HZS5.1N (B2) or RD5.1ES (B2)

D40~43 : S5688B or SR139-100

D45 : HZS6.2N (B2) or RD6.2ES (B2)

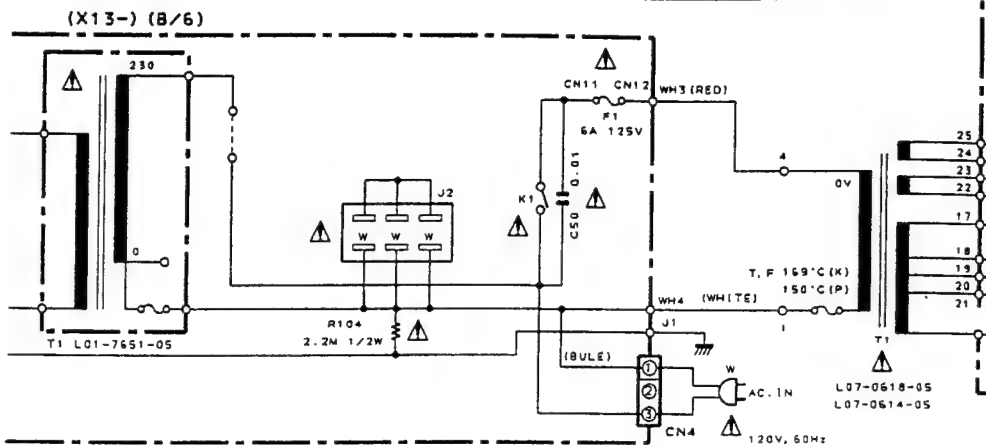
ED1 : 10-MT-58GK

A1 : W02-1129-05 or W02-1046-05

## K, P TYPE

DESTINATION	K	P
Ref. No.	0-10	1-01
F6.7	W244	8A
	W245	250V

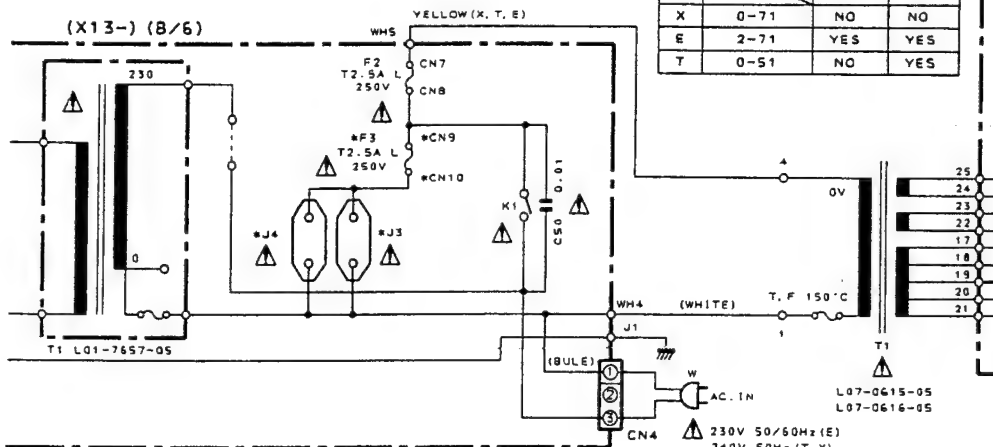
(X09)



## E, T, X TYPE

ABB	UNIT	REF NO	F3, CN9 CN10	J3, J4
X	0-71	NO	NO	NO
E	2-71	YES	YES	YES
T	0-51	NO	YES	YES

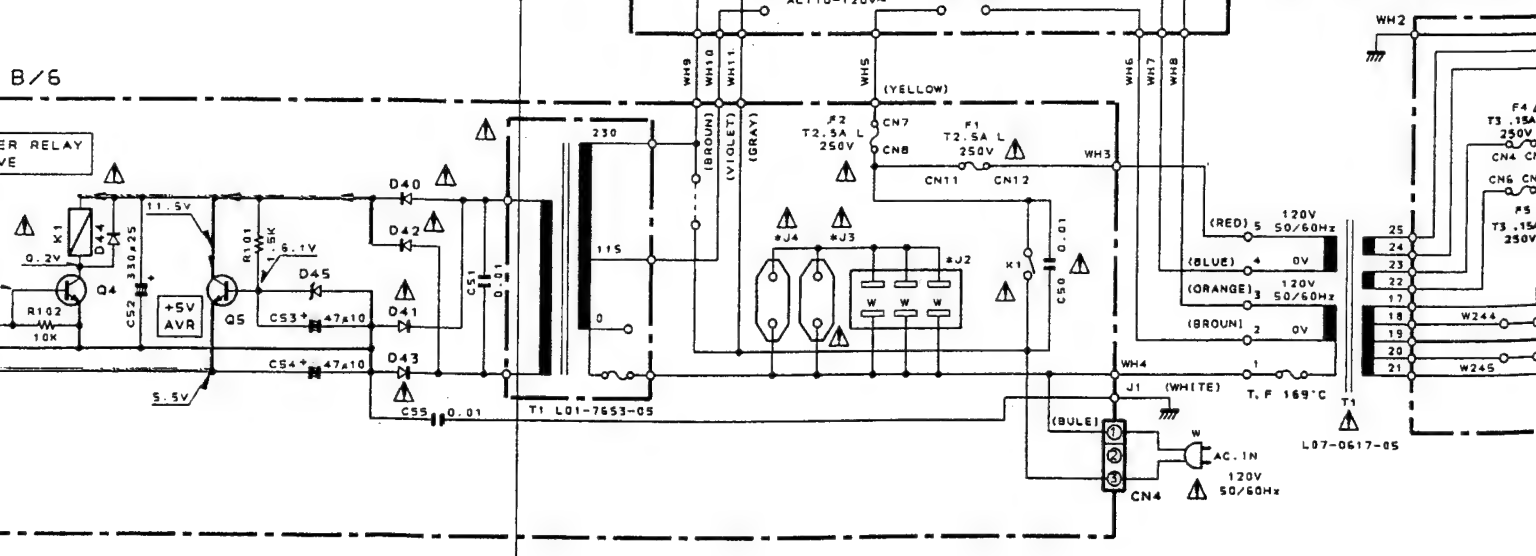
(X0)

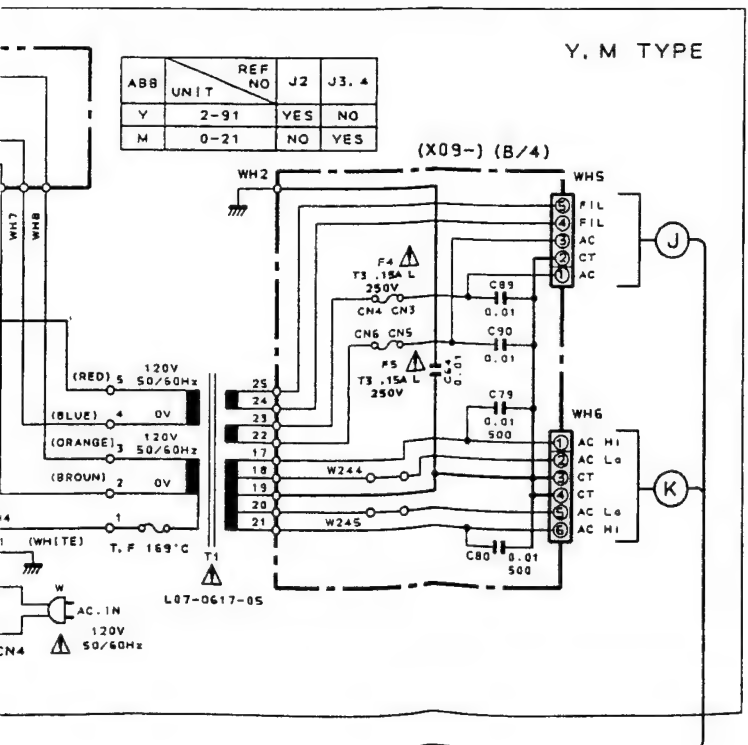
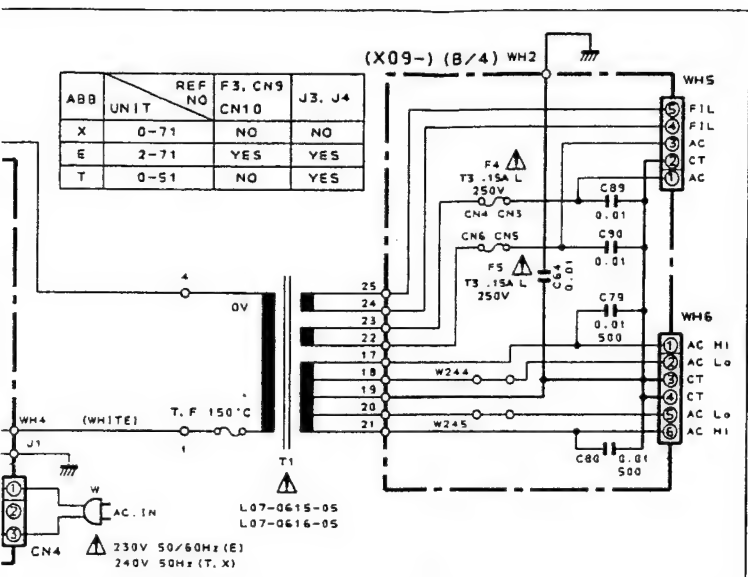
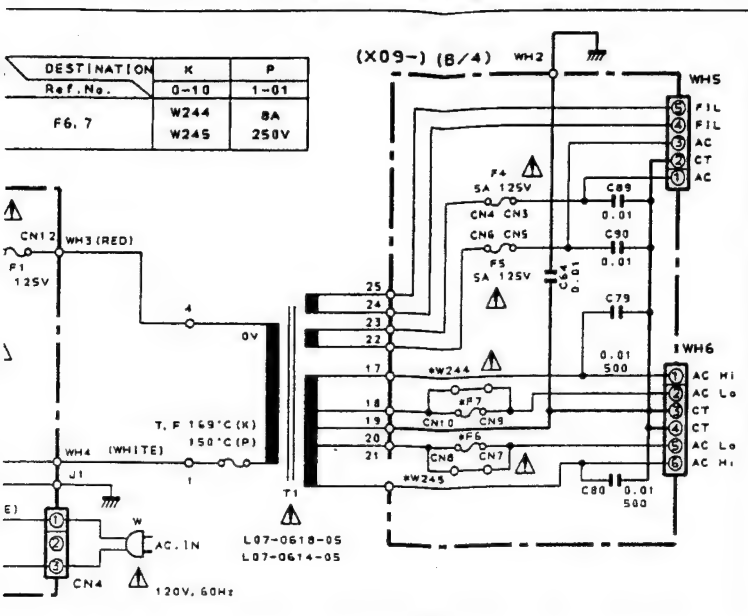


## X13 C/6

ABB	UNIT	REF NO	J2	J3, 4
Y	2-91	YES	NO	NO
M	0-21	NO	YES	YES

B/6

ER RELAY  
VE



DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

— +B LINE  
- - -B LINE  
— SIGNAL LINE  
— GND LINE

## KR-V6050/7050

**EXPLODED VIEW**

**COMPONENTS AND PARTS:**

- 601: Front panel
- 602: Tuner
- 603: Amplifier
- 604: Speaker
- 605: Speaker
- 606: Speaker
- 607: Speaker
- 608: Speaker
- 609: Speaker
- 610: Speaker
- 611: Speaker
- 612: Speaker
- 613: Speaker
- 614: Speaker
- 615: Speaker
- 616: Speaker
- 617: Speaker
- 618: Speaker
- 619: Speaker
- 620: Speaker
- 621: Speaker
- 622: Speaker
- 623: Speaker
- 624: Speaker
- 625: Speaker
- 626: Speaker
- 627: Speaker
- 628: Speaker
- 629: Speaker
- 630: Speaker
- 631: Speaker
- 632: Speaker
- 633: Speaker
- 634: Speaker
- 635: Speaker
- 636: Speaker
- 637: Speaker
- 638: Speaker
- 639: Speaker
- 640: Speaker
- 641: Speaker
- 642: Speaker
- 643: Speaker
- 644: Speaker
- 645: Speaker
- 646: Speaker
- 647: Speaker
- 648: Speaker
- 649: Speaker
- 650: Speaker
- 651: Speaker
- 652: Speaker
- 653: Speaker
- 654: Speaker
- 655: Speaker
- 656: Speaker
- 657: Speaker
- 658: Speaker
- 659: Speaker
- 660: Speaker
- 661: Speaker
- 662: Speaker
- 663: Speaker
- 664: Speaker
- 665: Speaker
- 666: Speaker
- 667: Speaker
- 668: Speaker
- 669: Speaker
- 670: Speaker
- 671: Speaker
- 672: Speaker
- 673: Speaker
- 674: Speaker
- 675: Speaker
- 676: Speaker
- 677: Speaker
- 678: Speaker
- 679: Speaker
- 680: Speaker
- 681: Speaker
- 682: Speaker
- 683: Speaker
- 684: Speaker
- 685: Speaker
- 686: Speaker
- 687: Speaker
- 688: Speaker
- 689: Speaker
- 690: Speaker
- 691: Speaker
- 692: Speaker
- 693: Speaker
- 694: Speaker
- 695: Speaker
- 696: Speaker
- 697: Speaker
- 698: Speaker
- 699: Speaker
- 700: Speaker
- 701: Speaker
- 702: Speaker
- 703: Speaker
- 704: Speaker
- 705: Speaker
- 706: Speaker
- 707: Speaker
- 708: Speaker
- 709: Speaker
- 710: Speaker
- 711: Speaker
- 712: Speaker
- 713: Speaker
- 714: Speaker
- 715: Speaker
- 716: Speaker
- 717: Speaker
- 718: Speaker
- 719: Speaker
- 720: Speaker
- 721: Speaker
- 722: Speaker
- 723: Speaker
- 724: Speaker
- 725: Speaker
- 726: Speaker
- 727: Speaker
- 728: Speaker
- 729: Speaker
- 730: Speaker
- 731: Speaker
- 732: Speaker
- 733: Speaker
- 734: Speaker
- 735: Speaker
- 736: Speaker
- 737: Speaker
- 738: Speaker
- 739: Speaker
- 740: Speaker
- 741: Speaker
- 742: Speaker
- 743: Speaker
- 744: Speaker
- 745: Speaker
- 746: Speaker
- 747: Speaker
- 748: Speaker
- 749: Speaker
- 750: Speaker
- 751: Speaker
- 752: Speaker
- 753: Speaker
- 754: Speaker
- 755: Speaker
- 756: Speaker
- 757: Speaker
- 758: Speaker
- 759: Speaker
- 760: Speaker
- 761: Speaker
- 762: Speaker
- 763: Speaker
- 764: Speaker
- 765: Speaker
- 766: Speaker
- 767: Speaker
- 768: Speaker
- 769: Speaker
- 770: Speaker
- 771: Speaker
- 772: Speaker
- 773: Speaker
- 774: Speaker
- 775: Speaker
- 776: Speaker
- 777: Speaker
- 778: Speaker
- 779: Speaker
- 780: Speaker
- 781: Speaker
- 782: Speaker
- 783: Speaker
- 784: Speaker
- 785: Speaker
- 786: Speaker
- 787: Speaker
- 788: Speaker
- 789: Speaker
- 790: Speaker
- 791: Speaker
- 792: Speaker
- 793: Speaker
- 794: Speaker
- 795: Speaker
- 796: Speaker
- 797: Speaker
- 798: Speaker
- 799: Speaker
- 800: Speaker

**ASSEMBLY INSTRUCTIONS:**

- Remove the front panel (601) from the chassis (602) by unscrewing the screws (603).
- Install the tuner (604) into the chassis (602) by aligning the pins (605) with the holes (606).
- Install the amplifier (607) into the chassis (602) by aligning the pins (608) with the holes (609).
- Install the speakers (610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800) into the chassis (602) by aligning the pins (610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752,

Parts with the exploded numbers larger than 700 are not supplied.

# KR-V6050/7050

## PARTS LIST

### UNIT LIST

	Singapore made	Malaysia made
Audio unit	X09-3750-11 (K) X09-3751-02 (P) X09-3750-22 (Y, M, X, T) X09-3752-72 (E) X09-3750-11 (KWW) X09-3751-02 (PWW)	X09-3750-11 (K) X09-3751-02 (P)
Accessory unit	X13-7200-10 (K, P) X13-7202-91 (Y) X13-7200-21 (M) X13-7200-71 (X) X13-7202-71 (E) X13-7200-10 (T) X13-7200-11 (KWW) X13-7200-10 (PWW)	X13-7200-10 (K, P)
Receiver unit	X14-3680-11 (K, P) X14-3680-22 (Y, M) X14-3680-72 (X) X14-3682-72 (E) X14-3680-51 (T) X14-3680-11 (KWW, PWW)	X14-3680-11 (K, P)



# KR-V6050/7050

## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No.	Address	New Parts	Parts No.	Description	Desti- nation	Re- marks
参照番号	位 置	新	部 品 番 号	部 品 名 / 規 格	仕 向	備 考
KR-V6050 (SINGAPORE MADE)						
601	1A	*	A01-2998-11	METALLIC CABINET	KPYMX E T KPYMXT	
602	2A	*	A22-1623-02	SUB PANEL ASSY		
602	2A	*	A22-1624-02	SUB PANEL ASSY		
602	2A	*	A22-1635-02	SUB PANEL ASSY		
603	3A	*	A60-0314-02	PANEL		
603	3A	*	A60-0315-02	PANEL	E	KPYMXT E
605	1A	*	A70-0925-05	REMOTE CONTROLLER ASSY		
605	1A	*	A70-0926-05	REMOTE CONTROLLER ASSY		
606	1A		A09-0106-08	BATTERY COVER		
608	2A	*	B07-2243-02	ESCUTCHEON	KPYMXT	
608	2A	*	B07-2244-02	ESCUTCHEON	E	KPYMX TE E
609	2A	*	B10-1945-23	FRONT GLASS	KPYMX	
609	2A	*	B10-1947-23	FRONT GLASS	TE	
610	2A		B43-0287-04	KENWOOD BADGE	E	
-			B46-0092-23	WARRANTY CARD	K	KPYMX
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0096-33	WARRANTY CARD	X	
-			B46-0121-23	WARRANTY CARD	P	
-			B46-0122-23	WARRANTY CARD	E	KPYMX
-			B46-0143-13	WARRANTY CARD	T	
-			B46-0197-00	QUESTIONNAIRE CARD	K	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		*	B60-1009-00	INSTRUCTION MANUAL (ENGLISH)	KPYMX	
-		*	B60-1010-00	INSTRUCTION MANUAL (FRENCH)	PE	M E E T
-		*	B60-1011-00	INSTRUCTION MANUAL (SPA,CHI)	M	
-		*	B60-1012-00	INSTRUCTION MANUAL (GE,DU,IT)	E	
-		*	B60-1183-00	INSTRUCTION MANUAL (ENGLISH)	E	
-		*	B60-1196-00	INSTRUCTION MANUAL (ENGLISH)	T	
615	1B		E03-0115-05	AC PLUG ADAPTER	M	ME Y KP X
616	1D		E30-2592-15	AC POWER CORD	ME	
616	1D		E30-2605-05	AC POWER CORD	Y	
616	1D		E30-2650-05	AC POWER CORD	KP	
616	1D		E30-2717-05	AC POWER CORD	X	
616	1D		E30-2721-05	AC POWER CORD	T	KPYX YMTE
617	1B, 2B		E31-7966-05	FLAT CABLE X13(CN1)-X14(CN3)		
617	1B, 2B		E35-0019-05	FLAT CABLE X13(CN1)-X14(CN3)		
618	2C	*	E35-0416-15	FLAT CABLE X09(CN1)-X13(CN5)		
619	2D		F20-1284-05	INSULATING BOARD	KPYMXT	
620	2D		F20-1297-05	INSULATING SHEET		
621	3A		G11-1098-04	SOFT TAPE	KPYXE M T KPYMXE KPYMXE	
		*	H50-0476-04	ITEM CARTON CASE		
		*	H50-0477-04	ITEM CARTON CASE		
		*	H50-0661-04	ITEM CARTON CASE		
-		*	H10-5387-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-5388-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-5472-02	POLYSTYRENE FOAMED FIXTURE	T	
-		*	H10-5473-02	POLYSTYRENE FOAMED FIXTURE	T	
-		*	H13-0118-04	CARTON BOARD	X	
-			H25-0225-04	PROTECTION BAG (850X450X0.03)	KPYMXE	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	KPYMXE	

L:Scandinavia

K:USA

P:Canada

Y:PX(Far East, Hawaii)

T:England

E:Europe

Y:AAFES(Europe)

X:Australia

M:Other Areas

△ indicates safety critical components.

# KR-V6050/7050

## PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位 置	New Parts 新	Parts No. 部 品 番 号	Description 部 品 名 / 規 格	Desti- nation 仕 向	Re- marks 備考
-			H25-0651-04	PROTECTION BAG (0232 PRINTED)	T	
-			H25-0654-04	PROTECTION BAG (0225 PRINTED)	T	
622	3C, 3D		J02-1013-05	FOOT	KPYMX	
622	3C, 3D		J02-1034-05	FOOT	TE	
624	1A		J19-2815-04	ANTENNA HOLDER		
625	2D, 3D		J19-3180-05	UNIT HOLDER		
628	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
630	3A	*	K29-5611-04	KNOB BASS, TREBLE		
631	3A	*	K29-5612-04	KNOB INPUT SELECTOR		
632	3A	*	K29-5613-04	KNOB VOLUME		
633	3A	*	K29-5672-04	KNOB LOUDNESS, BALANCE		
635	1B	*	L07-0614-05	POWER TRANSFORMER	P	
635	1B	*	L07-0615-05	POWER TRANSFORMER	E	
635	1B	*	L07-0616-05	POWER TRANSFORMER	XT	
635	1B	*	L07-0617-05	POWER TRANSFORMER	YM	
635	1B	*	L07-0618-05	POWER TRANSFORMER	K	
A	1D		N08-0128-35	BINDING POST (EARTH)	YMXT	
A	1D		N09-2909-05	TAPTITE SCREW (EARTH)	KP	
C	2D		N09-0333-05	TAPPING SCREW (3X12)		
D	2A, 3A		N09-1445-05	SET SCREW (M3X8)		
E	1A, 3C		N86-4008-45	BINDING HEAD TAPTITE SCREW		
G	1A, 1D		N89-3008-45	BINDING HEAD TAPTITE SCREW		
H	1B, 2B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
640	1B		T90-0174-05	LOOP ANTENNA		
641	1A		T90-0175-05	T TYPE ANTENNA		
642	1B		T90-0185-05	ANTENNA ADAPTOR	TE	
KR-V6050 (MALAYSIA MADE)						
601	1A	*	A01-2998-11	METALLIC CABINET		
602	2A	*	A22-1623-02	SUB PANEL ASSY		
603	3A	*	A60-0314-02	PANEL		
605	1A	*	A70-0925-05	REMOTE CONTROLLER ASSY		
606	1A	*	A09-0106-08	BATTERY COVER		
608	2A	*	B07-2243-02	ESCUTCHEON		
609	2A	*	B10-1945-23	FRONT GLASS		
-			B46-0092-23	WARRANTY CARD	K	
-			B46-0121-23	WARRANTY CARD	P	
-			B46-0197-00	QUESTIONNAIRE CARD	K	
-		*	B60-1009-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B60-1010-00	INSTRUCTION MANUAL (FRENCH)	P	
616	1D		E30-2650-05	AC POWER CORD		
617	1B, 2B		E31-7966-05	FLAT CABLE X13(CN1)-X14(CN3)		
618	2C	*	E35-0416-15	FLAT CABLE X09(CN1)-X13(CN5)		
619	2D		F20-1284-05	INSULATING BOARD		
620	2D		F20-1297-05	INSULATING SHEET		
621	3A		G11-1098-04	SOFT TAPE		
-		*	H50-0662-04	ITEM CARTON CASE		
-		*	H10-5512-02	POLYSTYRENE FOAMED FIXTURE L		
-		*	H10-5513-02	POLYSTYRENE FOAMED FIXTURE R		
-			H25-0225-04	PROTECTION BAG (850X450X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		

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# KR-V6050/7050

## PARTS LIST

× New Parts

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
622	3C, 3D		J02-1013-05	FOOT		
624	1A		J19-2815-04	ANTENNA HOLDER		
625	2D, 3D		J19-3180-05	UNIT HOLDER		
628	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
630	3A	*	K29-5611-04	KNØB BASS, TREBLE		
631	3A	*	K29-5612-04	KNØB INPUT SELECTOR		
632	3A	*	K29-5613-04	KNØB VOLUME		
633	3A	*	K29-5672-04	KNØB LOUDNESS, BALANCE		
635	1B	*	L07-0614-05	POWER TRANSFORMER	P	
635	1B	*	L07-0618-05	POWER TRANSFORMER	K	
A	1D		N09-2909-05	TAPTITE SCREW (EARTH)		
C	2D		N09-0333-05	TAPPING SCREW (3X12)		
D	2A, 3A		N09-1445-05	SET SCREW (M3X8)		
E	1A, 3C		N86-4008-45	BINDING HEAD TAPTITE SCREW		
G	1A, 1D		N89-3008-45	BINDING HEAD TAPTITE SCREW		
H	1B, 2B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
640	1B		T90-0174-05	LOOP ANTENNA		
641	1A		T90-0175-05	T TYPE ANTENNA		
KR-V7050 (SINGAPORE MADE)						
601	1A	*	A01-2998-11	METALLIC CABINET	KPYMX	
602	2A	*	A22-1621-02	SUB PANEL ASSY	TE	
602	2A	*	A22-1622-02	SUB PANEL ASSY		
603	3A	*	A60-0312-02	PANEL	KPYMX	
605	1A	*	X94-1010-91	REMOTE CONTROL ASSY UNIT		
605	1A	*	X94-1011-11	REMOTE CONTROL ASSY UNIT	TE	
606	1A		A09-0126-03	BATTERY COVER		
608	2A	*	B07-2230-02	ESCUTCHEON	KPYMX	
609	2A	*	B10-1945-23	FRONT GLASS	TE	
609	2A	*	B10-1947-23	FRONT GLASS		
610	2A		B43-0287-04	KENWOOD BADGE	K	
-			B46-0092-23	WARRANTY CARD		
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0096-33	WARRANTY CARD	X	
-			B46-0121-23	WARRANTY CARD	P	
-			B46-0122-23	WARRANTY CARD	E	
-			B46-0143-13	WARRANTY CARD	T	
-			B46-0197-00	QUESTIONNAIRE CARD	K	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		*	B60-1002-00	INSTRUCTION MANUAL (ENGLISH)	KPYMX	
-		*	B60-1003-00	INSTRUCTION MANUAL (FRENCH)	PE	
-		*	B60-1004-00	INSTRUCTION MANUAL (CHINESE)	M	
-		*	B60-1005-00	INSTRUCTION MANUAL (GE, DU, IT)	E	
-		*	B60-1006-00	INSTRUCTION MANUAL (SPANISH)	ME	
-		*	B60-1184-00	INSTRUCTION MANUAL (ENGLISH)	TE	
615	1B		E03-0115-05	AC PLUG ADAPTER	M	
616	1D		E30-2592-15	AC POWER CORD	ME	
616	1D		E30-2605-05	AC POWER CORD	Y	
616	1D		E30-2650-05	AC POWER CORD	KP	
616	1D		E30-2717-05	AC POWER CORD	X	
616	1D		E30-2721-05	AC POWER CORD	T	

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# KR-V6050/7050

## PARTS LIST

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
617	1B, 2B		E31-7966-05	FLAY CABLE X13(CN1)-X14(CN3)	KPX	
617	1B, 2B		E35-0019-05	FLAT CABLE X13(CN1)-X14(CN3)	YMTE	
618	2C	*	E35-0416-15	FLAT CABLE X09(CN1)-X13(CN5)		
619	2D		F20-1284-05	INSULATING BOARD		
620	2D		F20-1297-05	INSULATING SHEET		
621	3A		G11-1098-04	SOFT TAPE		
		*	H50-0474-04	ITEM CARTON CASE	KPYXE	
		*	H50-0475-04	ITEM CARTON CASE	M	
		*	H50-0490-04	ITEM CARTON CASE	T	
		*	H10-5387-02	POLYSTYRENE FOAMED FIXTURE	KPYMXE	
		*	H10-5388-02	POLYSTYRENE FOAMED FIXTURE	KPYMXE	
		*	H10-5472-02	POLYSTYRENE FOAMED FIXTURE	T	
		*	H10-5473-02	POLYSTYRENE FOAMED FIXTURE	T	
		*	H13-0118-04	CARTON BOARD	X	
			H25-0225-04	PROTECTION BAG (850X450X0.03)	KPYMXE	
			H25-0232-04	PROTECTION BAG (235X350X0.03)	KPYMXE	
			H25-0651-04	PROTECTION BAG (0232 PRINTED)	T	
			H25-0654-04	PROTECTION BAG (0225 PRINTED)	T	
622	3C, 3D		J02-1013-05	FOOT REAR	KP	
622	3C, 3D		J02-1024-05	FOOT FRONT	KP	
622	3C, 3D		J02-1034-05	FOOT	YMTE	
624	1A		J19-2815-04	ANTENNA HOLDER		
625	2D, 3D		J19-3180-05	UNIT HOLDER		
626	2B		J19-3323-05	UNIT HOLDER		
628	1D		J42-0083-05	POWER CORD BUSHING		
			J61-0307-05	WIRE BAND		
630	3A	*	K29-5611-04	KNOB BASS, TREBLE		
631	3A	*	K29-5612-04	KNOB INPUT SELECTOR		
632	3A	*	K29-5613-04	KNOB VOLUME		
633	3A	*	K29-5672-04	KNOB LOUDNESS, BALANCE		
635	1B	*	L07-0614-05	POWER TRANSFORMER	P	
635	1B	*	L07-0615-05	POWER TRANSFORMER	E	
635	1B	*	L07-0616-05	POWER TRANSFORMER	XT	
635	1B	*	L07-0617-05	POWER TRANSFORMER	YM	
635	1B	*	L07-0618-05	POWER TRANSFORMER	K	
A	1D		N08-0128-35	BINDING POST (EARTH)	YMXTE	
A	1D		N09-2909-05	TAPTITE SCREW (EARTH)	KP	
C	2D		N09-0333-05	TAPPING SCREW (3X12)		
D	2A, 3A		N09-1445-05	SET SCREW (M3X8)		
E	1A, 3C		N86-4008-45	BINDING HEAD TAPTITE SCREW		
G	1A, 1D		N89-3008-45	BINDING HEAD TAPTITE SCREW		
H	1B, 2B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
640	1B		T90-0174-05	LOOP ANTENNA		
641	1A		T90-0175-05	T TYPE ANTENNA	TE	
642	1B		T90-0185-05	ANTENNA ADAPTOR		
KR-V7050 (MALAYSIA MADE)						
601	1A	*	A01-2998-11	METALLIC CABINET		
602	2A	*	A22-1621-02	SUB PANEL ASSY		
603	3A	*	A60-0312-02	PANEL		
605	1A	*	X94-1010-91	REMOTE CONTROL ASSY UNIT		
606	1A		A09-0126-03	BATTERY COVER		

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考		
608	2A	*	B07-2230-02	ESCUTCHEON	K P			
609	2A	*	B10-1945-23	FRONT GLASS				
610	2A		B43-0287-04	KENWOOD BADGE				
-			B46-0092-23	WARRANTY CARD				
-			B46-0121-23	WARRANTY CARD				
-			B46-0197-00	QUESTIONNAIRE CARD				
-		*	B60-1002-00	INSTRUCTION MANUAL (ENGLISH)				
-		*	B60-1003-00	INSTRUCTION MANUAL (FRENCH)				
616	1D		E30-2650-05	AC POWER CORD				
617	1B, 2B		E31-7966-05	FLAT CABLE X13(CN1)-X14(CN3)				
618	2C	*	E35-0416-15	FLAT CABLE X09(CN1)-X13(CN5)				
619	2D		F20-1284-05	INSULATING BOARD	K P			
620	2D		F20-1297-05	INSULATING SHEET				
621	3A		G11-1098-04	SOFT TAPE				
-		*	H50-0663-04	ITEM CARTON CASE				
-		*	H10-5512-02	POLYSTYRENE FOAMED FIXTURE L				
-		*	H10-5513-02	POLYSTYRENE FOAMED FIXTURE R				
-			H25-0225-04	PROTECTION BAG (850X450X0.03)				
-			H25-0232-04	PROTECTION BAG (235X350X0.03)				
622	3C, 3D		J02-1013-05	FOOT REAR				
622	3C, 3D		J02-1024-05	FOOT FRONT				
624	1A		J19-2815-04	ANTENNA HOLDER				
625	2D, 3D		J19-3180-05	UNIT HOLDER				
626	2B		J19-3323-05	UNIT HOLDER				
628	1D		J42-0083-05	POWER CORD BUSHING	P K			
-			J61-0307-05	WIRE BAND				
630	3A	*	K29-5611-04	KNOB BASS, TREBLE				
631	3A	*	K29-5612-04	KNOB INPUT SELECTOR				
632	3A	*	K29-5613-04	KNOB VOLUME				
633	3A	*	K29-5672-04	KNOB LOUDNESS, BALANCE				
635	1B	*	L07-0614-05	POWER TRANSFORMER				
635	1B	*	L07-0618-05	POWER TRANSFORMER				
A	1D		N09-2909-05	TAPTITE SCREW (EARTH)				
C	2D		N09-0333-05	TAPPING SCREW (3X12)				
D	2A, 3A		N09-1445-05	SET SCREW (M3X8)				
E	1A, 3C		N86-4008-45	BINDING HEAD TAPTITE SCREW				
G	1A, 1D		N89-3008-45	BINDING HEAD TAPTITE SCREW				
H	1B, 2B		N89-3008-46	BINDING HEAD TAPTITE SCREW				
640	1B		T90-0174-05	LOOP ANTENNA	E	6		
641	1A		T90-0175-05	T TYPE ANTENNA				
AUDIO UNIT (X09-375X-XX)								
C1 ,2			CE04LW1H010M	ELECTRO 1.0UF 50WV				
C3 -8			CC45FSL1H101J	CERAMIC 100PF J				
C9 ,10			CE04LW0J221M	ELECTRO 220UF 6.3WV				
C11 ,12			CC45FSL1H100D	CERAMIC 10PF D				
C13 ,14			CE04LW2A010M	ELECTRO 1.0UF 100WV				
C15 ,16			CC45FSL1H221J	CERAMIC 220PF J				
C17 ,18			CC45FSL1H020C	CERAMIC 2.0PF C				
C19 ,20			CC45FSL1H470J	CERAMIC 47PF J				
C21 -24			CK45FF1H103Z	CERAMIC 0.010UF Z				
C25 -28			CF92FV1H224J	MF 0.22UF J				

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# KR-V6050/7050

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C25 -28			CF92FV1H224J	MF 0.22UF J	TE	7
C25 ,26			CQ92FM1H104J	MYLAR 0.10UF J	KPYMX	7
C25 ,26			CQ92FM1H104J	MYLAR 0.10UF J	KPYMXT	6
C29			CC45FSL1H101J	CERAMIC 100PF J		7
C30			CE04LW0J221M	ELECTRØ 220UF 6.3WV		
C31 ,32			CE04LW1H010M	ELECTRØ 1.0UF 50WV		7
C31 ,32			CE04LW1H010M	ELECTRØ 1.0UF 50WV	KPYMXT	6
C33 -38			CC45FSL1H101J	CERAMIC 100PF J		7
C33 -38			CC45FSL1H101J	CERAMIC 100PF J	KPYMXT	6
C39 ,40			CE04LW1A470M	ELECTRØ 47UF 10WV		7
C39 ,40			CE04LW1A470M	ELECTRØ 47UF 10WV	KPYMXT	6
C41 ,42			CC45FSL1H680J	CERAMIC 68PF J		7
C41 ,42			CC45FSL1H680J	CERAMIC 68PF J	KPYMXT	6
C43 ,44			CK45FF1H103Z	CERAMIC 0.010UF Z		
C45 ,46			CC45FSL1H221J	CERAMIC 220PF J		7
C45 ,46			CC45FSL1H221J	CERAMIC 220PF J	KPYMXT	6
C47 ,48			CC45FSL1H020C	CERAMIC 2.0PF C		7
C47 ,48			CC45FSL1H020C	CERAMIC 2.0PF C	KPYMXT	6
C49			CC45FSL1H680J	CERAMIC 68PF J		7
C49			CC45FSL1H680J	CERAMIC 68PF J	KPYMXT	6
C50			CC45FSL1H151J	CERAMIC 150PF J		7
C50			CC45FSL1H151J	CERAMIC 150PF J	KPYMXT	6
C51 -54			CK45FF1H103Z	CERAMIC 0.010UF Z		7
C51 -54			CK45FF1H103Z	CERAMIC 0.010UF Z	KPYMXT	6
C55 -58			CF92FV1H224J	MF 0.22UF J	TE	7
C55 ,56			CQ92FM1H104J	MYLAR 0.10UF J	KPYMXT	6
C59			CE04LW2A100M	ELECTRØ 10UF 100WV		
C60			CE04LW2A470M	ELECTRØ 47UF 100WV		
C61 ,62			CE04LW1V470M	ELECTRØ 47UF 35WV		7
C61 ,62			CE04LW1V470M	ELECTRØ 47UF 35WV	KPYMXT	6
C63			CE04LW1H010M	ELECTRØ 1.0UF 50WV		
C64			CK45FF1H103Z	CERAMIC 0.010UF Z		
C65			CE04LW1H4R7M	ELECTRØ 4.7UF 50WV		
C66			CE04LW1H2R2M	ELECTRØ 2.2UF 50WV		
C67 ,68			CE04LW1A101M	ELECTRØ 100UF 10WV		6
C69			CE04LW1C101M	ELECTRØ 100UF 16WV		
C70			CE04LW1C470M	ELECTRØ 47UF 16WV		
C71			CE04LW1C101M	ELECTRØ 100UF 16WV		
C72			CE04LW1A470M	ELECTRØ 47UF 10WV		
C73			CE04LW1C220M	ELECTRØ 22UF 16WV		
C74			CE04LW2A2R2M	ELECTRØ 2.2UF 100WV		6
C75			CE04LW1V4R7M	ELECTRØ 4.7UF 35WV		6
C76			CE04LW1V220M	ELECTRØ 22UF 35WV		
C77 ,78			CE04LW1V100M	ELECTRØ 10UF 35WV		
C79 ,80			CK45FE2H103P	CERAMIC 0.010UF P		
C81 ,82		*	C90-3490-05	ELECTRØ 6800UF 71WV		
C83 ,84			CE04LW1V222M	ELECTRØ 2200UF 35WV		
C85 ,86			CK45FF1H103Z	CERAMIC 0.010UF Z		
C87 -90			CK45FF1H103Z	CERAMIC 0.010UF Z		7
C89 ,90			CK45FF1H103Z	CERAMIC 0.010UF Z		6
C91			CE04LW1J470M	ELECTRØ 47UF 63WV		
C92			CE04LW1V101M	ELECTRØ 100UF 35WV		
C93 -96			CK45FF1H472Z	CERAMIC 4700PF Z	E	6
C93 -96			CK45FF1H472Z	CERAMIC 4700PF Z	TE	7
C97 ,98			CK45FB1H102K	CERAMIC 1000PF K		

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C99			CK45FF1H472Z	CERAMIC 4700PF Z	TE	7
C100			CK45FF1H103Z	CERAMIC 0.010UF Z	TE	7
C101,102			CK45FB1H102K	CERAMIC 1000PF K		7
C101,102			CK45FB1H102K	CERAMIC 1000PF K	KPYMXT	6
C103,104			CC45FSL1H561J	CERAMIC 560PF J	E	6
C103,104			CC45FSL1H561J	CERAMIC 560PF J	TE	7
C105,106			CK45FF1H103Z	CERAMIC 0.010UF Z		
C107-110			CC45FSL1H101J	CERAMIC 100PF J	E	6
C107-110			CC45FSL1H101J	CERAMIC 100PF J	TE	7
C111,112			CE04LW1A470M	ELECTRO 47UF 10WV		
C114			CK45FF1H103Z	CERAMIC 0.010UF Z		
C115,116			CE04LW0J221M	ELECTRO 220UF 6.3WV		
C117			CK45FF1H223Z	CERAMIC 0.022UF Z		6
C118			C91-0749-05	CERAMIC 220PF K		6
C119,120			CK45FF1H103Z	CERAMIC 0.010UF Z		
CN1	2C		E40-4159-05	FLAT CABLE CONNECTOR		
J1			E70-0020-05	LOCK TERMINAL BOARD SPEAKERS	KPYMX	7
J1			E70-0020-05	LOCK TERMINAL BOARD SPEAKERS	KPYMXT	6
J1			E70-0029-05	SCREW TERMINAL BOARD SPEAKERS	E	6
J1			E70-0029-05	SCREW TERMINAL BOARD SPEAKERS	TE	7
J2			E70-0014-05	LOCK TERMINAL BOARD CEN,REA SP		7
J2			E70-0014-05	LOCK TERMINAL BOARD CEN,REA SP	KPYMXT	6
J3		*	E63-0069-05	PHONE JACK MONI,VIDEO 1,2		
J4			E11-0188-05	MINIATURE PHONE JACK SYNCHRO		
J5			E11-0207-05	PHONE JACK HEAD PHONES	KPYMXT	6
J5			E11-0208-05	PHONE JACK HEAD PHONES	E	6
J5			E11-0208-05	PHONE JACK HEAD PHONES		7
F4 ,5			F04-5022-05	FUSE (UL) (125V 5A UL)	KP	
F4 ,5			F05-3121-05	FUSE (SEMKO) (250V T3.15A)	YMXT E	
F6 ,7			F05-8029-05	FUSE (UL) (250V 8A)	P	
CN3 -6			J13-0075-05	FUSE CLIP		
CN7 -10			J13-0041-05	FUSE CLIP	P	
J8			J11-0098-05	WIRE CLAMPER		6
L1 -3			L39-0085-05	PHASE COMPENSATION COIL	KPYMX	7
L1 -3			L39-0085-05	PHASE COMPENSATION COIL	KPYMXT	6
L1 -4			L39-0085-05	PHASE COMPENSATION COIL	TE	7
L1 ,2			L39-0085-05	PHASE COMPENSATION COIL	E	6
CP1 -3			R90-0840-05	COMPOSITE ELEMENTS		7
CP1 -3			R90-0840-05	COMPOSITE ELEMENTS	KPYMXT	6
CP1 ,2			R90-0840-05	COMPOSITE ELEMENTS	E	6
R15 ,16			RD14NB2E221J	RD 220 J 1/4W		
R21 ,22			RD14NB2E121J	RD 120 J 1/4W		
R23 ,24			RD14NB2E221J	RD 220 J 1/4W		
R31 -34			RD14NB2E220J	RD 22 J 1/4W		
R37 ,38			RD14NB2E332J	RD 3.3K J 1/4W		
R41 ,42			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		
R56			RD14NB2E4R7J	RD 4.7 J 1/4W		
R75 ,76			RD14NB2E221J	RD 220 J 1/4W		7
R75 ,76			RD14NB2E221J	RD 220 J 1/4W	KPYMXT	6
R81 ,82			RD14NB2E121J	RD 120 J 1/4W		7
R81 ,82			RD14NB2E121J	RD 120 J 1/4W	KPYMXT	6
R83 ,84			RD14NB2E221J	RD 220 J 1/4W		7
R83 ,84			RD14NB2E221J	RD 220 J 1/4W	KPYMXT	6

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R91 -94			RD14NB2E220J	RD 22 J 1/4W		7
R91 -94			RD14NB2E220J	RD 22 J 1/4W	KPYMXT	6
R97			RD14NB2E392J	RD 3.9K J 1/4W		7
R97			RD14NB2E392J	RD 3.9K J 1/4W	KPYMXT	6
R98			RD14NB2E822J	RD 8.2K J 1/4W		7
R98			RD14NB2E822J	RD 8.2K J 1/4W	KPYMXT	6
R101,102			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		7
R101,102			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W	KPYMXT	6
R118			RD14NB2E101J	RD 100 J 1/4W		
R120			RD14NB2E4R7J	RD 4.7 J 1/4W		6
R142			RD14NB2E680J	RD 68 J 1/4W		
R152			R92-0203-05	METAL-PLATE 0.47 K 5W		7
R152			R92-0203-05	METAL-PLATE 0.47 K 5W	KPYMXT	6
R158			RD14NB2E101J	RD 100 J 1/4W		
R161			RD14NB2E470J	RD 47 J 1/4W		
R162			RD14NB2E101J	RD 100 J 1/4W		
R163			RD14NB2E470J	RD 47 J 1/4W		7
R163			RD14NB2E470J	RD 47 J 1/4W	KPYMXT	6
R164			RD14NB2E101J	RD 100 J 1/4W		7
R164			RD14NB2E101J	RD 100 J 1/4W	KPYMXT	6
R165,166			RS14KB3A561J	FL-PROOF RS 560 J 1W		
R167			RS14KB3A121J	FL-PROOF RS 120 J 1W		7
R168-170			RS14KB3A221J	FL-PROOF RS 220 J 1W		7
R168-170			RS14KB3A221J	FL-PROOF RS 220 J 1W	KPYMXT	6
R169,170			RS14KB3A221J	FL-PROOF RS 220 J 1W	E	6
R171,172			RS14KB3A391J	FL-PROOF RS 390 J 1W		
R176			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		
R186			RD14NB2E222J	RD 2.2K J 1/4W		
VR1 -3			R12-1617-05	TRIMMING POT.(2.2K) IDL ADJ		7
VR1 ,2			R12-1618-05	TRIMMING POT.(3.3K) IDL ADJ		6
VR3			R12-1617-05	TRIMMING POT.(2.2K) IDL ADJ	KPYMXT	6
K1 ,2			S51-2078-05	MAGNETIC RELAY		
K1 ,2			S51-2092-05	MAGNETIC RELAY		7
K3			S76-0005-05	MAGNETIC RELAY	KPYMXT	6
K3			S76-0005-05	MAGNETIC RELAY		7
K4			S76-0016-05	MAGNETIC RELAY		
K4			S76-0017-05	MAGNETIC RELAY		7
S1			S31-2136-05	SLIDE SWITCH IMPEDANCE SELECT		6
D1 ,2			HSS104A	DIODE		
D1 ,2			1SS131	DIODE		
D3 ,4			HZS11N(B2)	ZENER DIODE		7
D3 ,4			RD11ES(B2)	ZENER DIODE		7
D5 ,6			HZS13N(B2)	ZENER DIODE		7
D5 ,6			RD13ES(B2)	ZENER DIODE		7
D7 -18			HSS104A	DIODE		7
D7 -18			1SS131	DIODE		7
D9 -18			HSS104A	DIODE	KPYMXT	6
D9 -18			1SS131	DIODE	KPYMXT	6
D9 ,10			HSS104A	DIODE	E	6
D9 ,10			1SS131	DIODE	E	6
D15 -18			HSS104A	DIODE	E	6
D15 -18			1SS131	DIODE	E	6
D19			HZSS.1N(B2)	ZENER DIODE		

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D19			RD5.1ES(B2)	ZENER DIODE		
D20 -22			HSS104A	DIODE	E	6
D20 -22			1SS131	DIODE	E	6
D20 -23			HSS104A	DIODE	KPYMXT	6
D20 -23			1SS131	DIODE	KPYMXT	6
D20 -24			HSS104A	DIODE		7
D20 -24			1SS131	DIODE		7
D25			HZS5.1N(B2)	ZENER DIODE		6
D25			RD5.1ES(B2)	ZENER DIODE		6
D26			HSS104A	DIODE		
D26			1SS131	DIODE		
D27			HZS4.7N(B2)	ZENER DIODE		
D27			RD4.7ES(B2)	ZENER DIODE		
D28			D3SBA20F03	DIODE		
D28			RBV-402LFA	DIODE		
D29			D5SBA20F03	DIODE		6
D29			RBV-602LFA	DIODE		6
D29 ,30			D5SBA20F03	DIODE		7
D29 ,30			RBV-602LFA	DIODE		7
D31 ,32			SS688B	DIODE		
D31 ,32			1SR139-100	DIODE		
D33			HZS15N(B2)	ZENER DIODE		
D33			RD15ES(B2)	ZENER DIODE		
D34			HZS16N(B2)	ZENER DIODE		
D34			RD16ES(B2)	ZENER DIODE		
D35 ,36			HSS104A	DIODE		
D35 ,36			1SS131	DIODE		
D37 ,38			HZS5.1N(B2)	ZENER DIODE		
D37 ,38			RD5.1ES(B2)	ZENER DIODE		
D39 -42			HSS104	DIODE	E	6
D39 -42			1SS133	DIODE	E	6
D39 -52			HSS104	DIODE		7
D39 -52			HSS104	DIODE	KPYMXT	6
D39 -52			1SS133	DIODE		7
D39 -52			1SS133	DIODE	KPYMXT	6
D45 -52			HSS104	DIODE	E	6
D45 -52			1SS133	DIODE	E	6
D53 ,54			HZS11N(B2)	ZENER DIODE		7
D53 ,54			RD11ES(B2)	ZENER DIODE		7
D55 ,56			HZS13N(B2)	ZENER DIODE		7
D55 ,56			RD13ES(B2)	ZENER DIODE		7
D57 -61			HSS104A	DIODE		7
D57 -61			1SS131	DIODE		7
D59 -63			HSS104A	DIODE		6
D59 -63			1SS131	DIODE		6
IC1			TA8409S	IC(MOTOR CONTROL)		
IC2		*	CXA1558L	IC		
Q1 -4			2SA992(F,E)	TRANSISTOR		
Q5 -8			2SC2631(R,S)	TRANSISTOR		
Q9 ,10			2SA1123(R,S)	TRANSISTOR		
Q11 ,12			2SC4137F19(V,W)	TRANSISTOR		
Q13 ,14			2SD2222BT	TRANSISTOR		
Q13 ,14		*	2SD2449LB	TRANSISTOR		
Q15 ,16			2SB1470BT	TRANSISTOR		
Q15 ,16		*	2SB1594LB	TRANSISTOR		

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Q17 ,18			2SC1845(F,E)	TRANSISTOR		7
Q19 ,20			2SA992(F,E)	TRANSISTOR		7
Q21			2SA1175(F,E)	TRANSISTOR		7
Q21			2SA933S(Q,R)	TRANSISTOR		7
Q22			2SC1740S(Q,R)	TRANSISTOR		7
Q22			2SC2785(F,E)	TRANSISTOR		7
Q23 ,24			2SC1845(F,E)	TRANSISTOR		7
Q31 -34			2SA992(F,E)	TRANSISTOR	KPYMXT	6
Q31 -34			2SA992(F,E)	TRANSISTOR		7
Q35			2SC2631(R,S)	TRANSISTOR		6
Q35			2SC2631(R,S)	TRANSISTOR	KPYMXT	7
Q36			2SC1845(F,E)	TRANSISTOR		6
Q36			2SC1845(F,E)	TRANSISTOR	KPYMXT	7
Q37			2SC2631(R,S)	TRANSISTOR		6
Q37			2SC2631(R,S)	TRANSISTOR	KPYMXT	7
Q38			2SC1845(F,E)	TRANSISTOR		6
Q38			2SC1845(F,E)	TRANSISTOR	KPYMXT	7
Q39			2SA1123(R,S)	TRANSISTOR		6
Q39			2SA1123(R,S)	TRANSISTOR	KPYMXT	7
Q40			2SA992(F,E)	TRANSISTOR		6
Q40			2SA992(F,E)	TRANSISTOR	KPYMXT	7
Q41 ,42			2SC4137F19(V,W)	TRANSISTOR		6
Q41 ,42			2SC4137F19(V,W)	TRANSISTOR	KPYMXT	7
Q43			2SD2255BT	TRANSISTOR	K	6
Q43			2SD2255BT*1	TRANSISTOR	K	7
Q43		*	2SD2384LB	TRANSISTOR	PYMXT	6
Q43		*	2SD2384LB	TRANSISTOR	PYMXTE	7
Q44			2SD2340BT	TRANSISTOR	KPYMXT	6
Q44			2SD2340BT	TRANSISTOR		7
Q45			2SB1493BT	TRANSISTOR	K	6
Q45			2SB1493BT*1	TRANSISTOR	K	7
Q45		*	2SB1555LB	TRANSISTOR	PYMXT	6
Q45		*	2SB1555LB	TRANSISTOR	PYMXTE	7
Q46			2SB1531BT	TRANSISTOR	KPYMXT	6
Q46			2SB1531BT	TRANSISTOR		7
Q47 -50			2SC1845(F,E)	TRANSISTOR		6
Q47 -50			2SC1845(F,E)	TRANSISTOR	KPYMXT	7
Q49 ,50			2SC1845(F,E)	TRANSISTOR	E	6
Q51			2SA992(F,E)	TRANSISTOR		6
Q52			2SC1845(F,E)	TRANSISTOR		6
Q53			2SC1740S(Q,R)	TRANSISTOR		6
Q53			2SC2785(F,E)	TRANSISTOR		6
Q55			2SA992(F,E)	TRANSISTOR		6
Q56 -58			2SC1740S(Q,R)	TRANSISTOR	KPYMXT	6
Q56 -58			2SC2785(F,E)	TRANSISTOR	KPYMXT	6
Q56 -61			2SC1740S(Q,R)	TRANSISTOR		7
Q56 -61			2SC2785(F,E)	TRANSISTOR		7
Q56 ,57			2SC1740S(Q,R)	TRANSISTOR	E	6
Q56 ,57			2SC2785(F,E)	TRANSISTOR	E	6
Q60 ,61			2SC1740S(Q,R)	TRANSISTOR		6
Q60 ,61			2SC2785(F,E)	TRANSISTOR		6
Q62			0TC124ES	DIGITAL TRANSISTOR		6
Q62			UN4212	DIGITAL TRANSISTOR		6
Q63			2SA1175(F,E)	TRANSISTOR		6
Q63			2SA933S(Q,R)	TRANSISTOR		6

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Q64 -67 Q64 -67 Q65 ,66 Q68			2SC2878(B) 2SC2878(B) 2SC2878(B) 2SA1534A	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	KPYMXT E	7 6 6
ACCESSORY UNIT (X13-719X-XX) : KR-V7050						
D1			B30-1291-05	LED(LN21CPSLX(V)-(TA4))		
C1			CE04LW1V4R7M	ELECTRO 4.7UF 35WV	TE	
C2			C91-0769-05	CERAMIC 0.01UF K		
C3			C90-1827-05	BACKUP 0.047F 5.5WV		
C4			CE04LW1A101M	ELECTRO 100UF 10WV		
C5 ,6			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C7			CE04LW1C330M	ELECTRO 33UF 16WV	TE	
C8			CE04LW1H330M	ELECTRO 33UF 50WV		
C9 -11			C91-0769-05	CERAMIC 0.01UF K		
C12 ,13			CF92FV1H223J	MF 0.022UF J		
C14			C91-0745-05	CERAMIC 100PF K		
C21 ,22			CE04LW1C470M	ELECTRO 47UF 16WV		
C23 ,24			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C25 ,26			CF92FV1H473J	MF 0.047UF J		
C27 ,28			CC45FSL1H221J	CERAMIC 220PF J		
C29 -32			CC45FSL1H470J	CERAMIC 47PF J		
C33 ,34			C90-3253-05	ELECTRO 1UF 50WV		
C35			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C36			C90-3253-05	ELECTRO 1UF 50WV		
C37 -39			CE04LW1H100M	ELECTRO 10UF 50WV		
C40			C90-3225-05	ELECTRO 10UF 16WV		
△ C50			C91-1439-05	FILM 0.01UF 250VAC		
C51			CK45FF1H103Z	CERAMIC 0.010UF Z		
C52			CE04EW1E331M	ELECTRO 330UF 25WV		
C53 ,54			CE04LW1A470M	ELECTRO 47UF 10WV		
C55			CK45FF1H103Z	CERAMIC 0.010UF Z		
C63 ,64			CF92FV1H333J	MF 0.033UF J	TE TE TE	
C65			CF92FV1H104J	MF 0.10UF J		
C201			CF92FV1H271K	MF 270PF K		
C202			CE04LW1V100M	ELECTRO 10UF 35WV		
C203,204			CK45FF1H103Z	CERAMIC 0.010UF Z		
C205			CE04LW1V100M	ELECTRO 10UF 35WV	TE	
C206,207			CC45FCH1H270J	CERAMIC 27PF J	TE	
C208			CE04LW1V100M	ELECTRO 10UF 35WV	TE	
C209-211			CK45FF1H103Z	CERAMIC 0.010UF Z	TE	
CN1	2B		E40-4203-05	FLAT CABLE CONNECTOR	KPX	
CN1	2B		E40-4207-05	FLAT CABLE CONNECTOR	YMTE	
CN5	2C		E40-4199-05	FLAT CABLE CONNECTOR		
△ J2			E03-0111-05	AC OUTLET	KPY	
△ J3 ,4			E03-0108-05	AC OUTLET	ME	
△ J3 ,4			E03-0109-05	AC OUTLET	T	
△ F1			F05-6029-05	FUSE (UL) (125V 6A)	KP	
△ F1 ,2			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	YM	
△ F2			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	XT	
△ F2 ,3			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	E	
CN7 -10			J13-0075-05	FUSE CLIP	E	
CN7 ,8			J13-0075-05	FUSE CLIP	YMXT	
CN11,12			J13-0075-05	FUSE CLIP	KPYM	

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L1 -3 L201, 202 T1 T1 T1			L40-1091-17 L40-1001-17 L01-7651-05 L01-7653-05 L01-7657-05	SMALL FIXED INDUCTOR(10UH,K) SMALL FIXED INDUCTOR(10UH,K) POWER TRANSFORMER POWER TRANSFORMER POWER TRANSFORMER	KPYMX TE KP YM XTE	
X1 X201 X202			L78-0267-05 L77-2002-05 L78-0503-05	RESONATOR 4.194MHz CRYSTAL RESONATOR 4.332MHz RESONATOR 4.00MHz	TE TE	
CP1 R81 ,82 R104 VR1 ,2 VR3			R90-0492-05 RD14NB2E101J R92-0173-05 R10-3048-05 R29-5075-05	MULTI-COMP 100KX8 J 1/6W RD 100 J 1/4W RC 2.2M M 1/2W POTENTIOMETER(10KX2) BASS, TREB POTENTIOMETER(100KX4) VOLUME	KP	
VR4 VR5		*	R05-5053-05 R10-5063-05	POTENTIOMETER(200K) BALANCE POTENTIOMETER(100KX2) LOUDNESS		
K1 S1 -36 S1 -39 S50 ,51			S76-0002-05 S40-1064-05 S40-1064-05 S62-0001-05	MAGNETIC RELAY PUSH SWITCH KEY BOARD PUSH SWITCH KEY BOARD SLIDE SWITCH VOLTAGE SELECTOR	KPYMX TE YM	
S40			T99-0509-05	SPEED DETECTOR INPUT SELECTOR		
D2 -18 D2 -18 D19 D19 D20			HSS104 ISS133 HZS2.7N(B2) RD2.7ES(B2) HZS5.1N(B2)	DIODE DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
D20 D31 D31 D32 D32 ,33			RD5.1ES(B2) HSS104 ISS133 HSS104 HSS104	ZENER DIODE DIODE DIODE DIODE DIODE	KP KP X TE	
D36 D40 -43 D40 -43 D44 D44			HSS104 S56888 1SR139-100 HSS104 ISS133	DIODE DIODE DIODE DIODE DIODE	YM	
D45 D45 ED1 IC1 IC2		*	HZS6.2N(B2) RD6.2ES(B2) 10-MT-58GK UPD78044GF-021 PST529C	ZENER DIODE ZENER DIODE INDICATOR TUBE IC(8BIT MICROPROCESSOR) IC(SYSTEM RESET)		
IC3 IC201 IC202 Q1 ,2 Q1 ,2			NJM4565L TDA7330A LC6543H-4600 2SC1740S(Q,R) 2SC2785(F,E)	IC(OP AMP X2) IC(RDS DEMODULATOR) IC TRANSISTOR TRANSISTOR	TE TE	
Q3 Q4 Q5			2SA1175(F,E) 2SC2003(L,K) 2SC3940A(R,S)	TRANSISTOR TRANSISTOR TRANSISTOR	YM	
A1 A1			W02-1046-05 W02-1153-05	ELECTRIC CIRCUIT MODULE ELECTRIC CIRCUIT MODULE		
ACCESSORY UNIT (X13-720X-XX) KR-V6050						
D1			B30-1291-05	LED(LN21CPSLX(V)-(TA4))		

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C1			CE04LW1V4R7M	ELECTRO 4.7UF 35WV	TE	
C2			C91-0769-05	CERAMIC 0.01UF K		
C3			C90-1827-05	BACKUP 0.047F 5.5WV		
C4			CE04LW1A101M	ELECTRO 100UF 10WV		
C5 ,6			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C7			CE04LW1C330M	ELECTRO 33UF 16WV	TE	
C8			CE04LW1H330M	ELECTRO 33UF 50WV		
C9 -11			C91-0769-05	CERAMIC 0.01UF K		
C12 ,13			CF92FV1H223J	MF 0.022UF J		
C14			C91-0745-05	CERAMIC 100PF K		
C21 ,22			CE04LW1C470M	ELECTRO 47UF 16WV		
C23 ,24			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C25 ,26			CF92FV1H473J	MF 0.047UF J		
C27 ,28			CC45FSL1H221J	CERAMIC 220PF J		
C29 -32			CC45FSL1H470J	CERAMIC 47PF J		
C33 ,34			C90-3253-05	ELECTRO 1UF 50WV		
C35			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C36			C90-3253-05	ELECTRO 1UF 50WV		
C37 -39			CE04LW1H100M	ELECTRO 10UF 50WV		
C40			C90-3225-05	ELECTRO 10UF 16WV		
C50			C91-1439-05	FILM 0.01UF 250VAC		
C51			CK45FF1H103Z	CERAMIC 0.010UF Z		
C52			CE04EW1E331M	ELECTRO 330UF 25WV		
C53 ,54			CE04LW1A470M	ELECTRO 47UF 10WV		
C55			CK45FF1H103Z	CERAMIC 0.010UF Z		
C63 ,64			CF92FV1H333J	MF 0.033UF J	TE	
C65			CF92FV1H104J	MF 0.10UF J		
C201			CF92FV1H271K	MF 270PF K		
C202			CE04LW1V100M	ELECTRO 10UF 35WV		
C203,204			CK45FF1H103Z	CERAMIC 0.010UF Z		
C205			CE04LW1V100M	ELECTRO 10UF 35WV	TE	
C206,207			CC45FCH1H270J	CERAMIC 27PF J	TE	
C208			CE04LW1V100M	ELECTRO 10UF 35WV	TE	
C209-211			CK45FF1H103Z	CERAMIC 0.010UF Z	TE	
CN1	2B		E40-4203-05	FLAT CABLE CONNECTOR	KPX	
CN1	2B		E40-4207-05	FLAT CABLE CONNECTOR	YMTE	
CN5	2C		E40-4199-05	FLAT CABLE CONNECTOR		
J2			E03-0111-05	AC OUTLET	KPY	
J3 ,4			E03-0108-05	AC OUTLET	ME	
J3 ,4			E03-0109-05	AC OUTLET	T	
F1			F05-6029-05	FUSE (UL) (125V 6A)	KP	
F1 ,2			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	YM	
F2			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	XT	
F2 ,3			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	E	
CN7 -10			J13-0075-05	FUSE CLIP	E	
CN7 ,8			J13-0075-05	FUSE CLIP	YMXT	
CN11,12			J13-0075-05	FUSE CLIP	KPYM	
L1 -3			L40-1091-17	SMALL FIXED INDUCTOR	KPYMX	
L201,202			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)	TE	
T1			L01-7651-05	POWER TRANSFORMER	KP	
T1			L01-7653-05	POWER TRANSFORMER	YM	
T1			L01-7657-05	POWER TRANSFORMER	XTE	
X1			L78-0267-05	RESONATOR 4.194MHz		

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X201 X202			L77-2002-05 L78-0503-05	CRYSTAL RESONATOR 4.332MHz RESONATOR 4.00MHz	TE TE	
CP1 R81 ,82 R104 VR1 ,2 VR3			R90-0492-05 RD14NB2E101J R92-0173-05 R10-3048-05 R29-5075-05	MULTI-COMP 100KX8 J 1/6W RD 100 J 1/4W RC 2.2M M 1/2W POTENTIOMETER(10KX2) BASS,TREB POTENTIOMETER(100KX4)VOLUME	KP	
VR4 VR5		*	R05-5053-05 R10-5063-05	POTENTIOMETER(200K) BALANCE POTENTIOMETER(100KX2)LOUDNESS		
K1 S1 -23 S1 -32 S37 -39 S50 ,51			S76-0002-05 S40-1064-05 S40-1064-05 S40-1064-05 S62-0001-05	MAGNETIC RELAY PUSH SWITCH KEY BOARD PUSH SWITCH KEY BOARD PUSH SWITCH KEY BOARD SLIDE SWITCH VOLTAGE SELECTOR	E KP TE YM	
S40			T99-0509-05	SPEED DETECTOR INPUT SELECTOR		
D2 -18 D2 -18 D19 D19 D20			HSS104 1SS133 HZS2.7N(B2) RD2.7ES(B2) HZS5.1N(B2)	DIODE DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
D20 D31 D31 D32 D32			RD5.1ES(B2) HSS104 1SS133 HSS104 1SS133	ZENER DIODE DIODE DIODE DIODE DIODE	KP KP X X	
D32 -34 D32 -34 D32 ,33 D32 ,33 D34			HSS104 1SS133 HSS104 1SS133 HSS104	DIODE DIODE DIODE DIODE DIODE	T T E E KP YM	
D34 D35 D35 D36 D36			1SS133 HSS104 1SS133 HSS104 1SS133	DIODE DIODE DIODE DIODE DIODE	KP YM YM YM YM	
D40 -43 D40 -43 D44 D44 D45			S5688B 1SR139-100 HSS104 1SS133 HZS6.2N(B2)	DIODE DIODE DIODE DIODE ZENER DIODE		
D45 ED1 IC1 IC2 IC3		*	RD6.2ES(B2) 10-MT-58GK UPD78044GF-021 PST529C NJM4565L	ZENER DIODE INDICATOR TUBE IC(8BIT MICROPROCESSOR) IC(SYSTEM RESET) IC(OP AMP X2)		
IC201 IC202 Q1 ,2 Q1 ,2 Q3			TDA7330A LC6543H-4600 2SC1740S(Q,R) 2SC2785(F,E) 2SA1175(F,E)	IC(RDS DEMODULATOR) IC TRANSISTOR TRANSISTOR TRANSISTOR	TE TE YM YM	
Q3 Q4 Q5			2SA933S(Q,R) 2SC2003(L,K) 2SC3940A(R,S)	TRANSISTOR TRANSISTOR TRANSISTOR	YM	

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A1			W02-1046-05	ELECTRIC CIRCUIT MODULE		
A1			W02-1153-05	ELECTRIC CIRCUIT MODULE		
RECEIVER UNIT (X14-368X-XX)						
C1 -4			CK45FF1H103Z	CERAMIC 0.010UF Z		
C5			CE04LW1C470M	ELECTRO 47UF 16WV		
C6			CK45FF1H103Z	CERAMIC 0.010UF Z		
C7			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C8			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C9			CC45FSL1H101J	CERAMIC 100PF J		
C10			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C11			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		
C12			CK45FF1H103Z	CERAMIC 0.010UF Z		
C13			CQ92FM1H153J	MYLAR 0.015UF J		
C14 ,15			CK45FF1H223Z	CERAMIC 0.022UF Z		
C16			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C17			CK45FF1H223Z	CERAMIC 0.022UF Z		
C18			CE04LW1V100M	ELECTRO 10UF 35WV		
C19			CK45FF1H103Z	CERAMIC 0.010UF Z		
C20			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C21			CE04LW1C101M	ELECTRO 100UF 16WV		
C27 ,28			CQ92FM1H153J	MYLAR 0.015UF J	YMX	
C27 ,28			CQ92FM1H183J	MYLAR 0.018UF J	KP	
C27 ,28			CQ92FM1H392J	MYLAR 3900PF J	TE	
C29 ,30			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C40			CK45FF1H103Z	CERAMIC 0.010UF Z		
C41			CC45FCH1H220J	CERAMIC 22PF J		
C42			CC45FCH1H270J	CERAMIC 27PF J		
C43 -45			CK45FB1H471K	CERAMIC 470PF K		
C46 ,47			CK45FF1H103Z	CERAMIC 0.010UF Z		
C48			CQ92FM1H223J	MYLAR 0.022UF J		
C49			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C50			CE04LW1C470M	ELECTRO 47UF 16WV		
C51			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C52			CE04LW1A470M	ELECTRO 47UF 10WV		
C56			CC45FCH1H220J	CERAMIC 22PF J		
C62 -64			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C65			CE04LW1HR22M	ELECTRO 0.22UF 50WV		
C66			CE04LW1V100M	ELECTRO 10UF 35WV		
C67 ,68			CC45FSL1H101J	CERAMIC 100PF J	KPYMX	
C67 ,68			CC45FSL1H221J	CERAMIC 220PF J	TE	
C69			CE04LW1V100M	ELECTRO 10UF 35WV		
C70			CK45FB1H561K	CERAMIC 560PF K		
C71			CQ92FM1H103J	MYLAR 0.010UF J		
C83			CK45FB1H471K	CERAMIC 470PF K		
C84 ,85			C91-0745-05	CERAMIC 100PF K		
C106			CE04LW1C470M	ELECTRO 47UF 16WV		
C107			CK45FF1H473Z	CERAMIC 0.047UF Z		
C123			CE04LW1HOR1M	ELECTRO 0.1UF 50WV	TE	
C135,136			CQ92FM1H682J	MYLAR 6800PF J	YM	
C172			CC45FSL1H330J	CERAMIC 33PF J	TE	
C173,174			CK45FB1H102K	CERAMIC 1000PF K	TE	
C176			CK45FB1H102K	CERAMIC 1000PF K	KPYMX	
C177			CE04LW1A470M	ELECTRO 47UF 10WV	TE	
C178			CK45FF1H103Z	CERAMIC 0.010UF Z	TE	6

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C179, 180 C181 C182 C201, 202 C201, 202			CE04LW1V100M CK45FF1H103Z CC45FSL1H150J CC45FSL1H390J CC45FSL1H390J	ELECTRØ 10UF 35WV CERAMIC 0.010UF Z CERAMIC 15PF J CERAMIC 39PF J CERAMIC 39PF J	E TE	6 7
C203, 204 C205, 206 C207, 208 C209, 210 C211, 212			CE04LW1V100M CC45FSL1H221J CE04LW1A101M CK45FB1H102K CQ92FM1H123J	ELECTRØ 10UF 35WV CERAMIC 220PF J ELECTRØ 100UF 10WV CERAMIC 1000PF K MYLAR 0.012UF J		
C213, 214 C215, 216 C219 C220 C221-236			CQ92FM1H332J CE04LW1V4R7M CK45FB1H681K CK45FF1H103Z C91-0749-05	MYLAR 3300PF J ELECTRØ 4.7UF 35WV CERAMIC 680PF K CERAMIC 0.010UF Z CERAMIC 220PF K	TE	
C223, 224 C223, 224 C227, 228 C227, 228 C231, 232			C91-0749-05 C91-0749-05 C91-0749-05 C91-0749-05 C91-0749-05	CERAMIC 220PF K CERAMIC 220PF K CERAMIC 220PF K CERAMIC 220PF K CERAMIC 220PF K	KPYMX KPYMXT KPYMX KPYMXT KPYMX	7 6 7 6 7
C231, 232 C237, 238 C239-242 C239, 240 C239, 240			C91-0749-05 CE04LW1V4R7M CC45FSL1H221J CC45FSL1H221J CC45FSL1H221J	CERAMIC 220PF K ELECTRØ 4.7UF 35WV CERAMIC 220PF J CERAMIC 220PF J CERAMIC 220PF J	KPYMXT TE KPYMX KPYMXT	6  7 6
C243 C244 C245, 246 C247, 248 C249, 250			CC45FSL1H101J CK45FF1H103Z CE04LW1V100M CE04LW1C101M CK45FF1H103Z	CERAMIC 100PF J CERAMIC 0.010UF Z ELECTRØ 10UF 35WV ELECTRØ 100UF 16WV CERAMIC 0.010UF Z		
C251, 252 C253 C254 C255 C256			CE04LW1C470M CK45FB1H102K CE04LW1C470M CK45FB1H102K CE04LW1C470M	ELECTRØ 47UF 16WV CERAMIC 1000PF K ELECTRØ 47UF 16WV CERAMIC 1000PF K ELECTRØ 47UF 16WV		
C257 C258 C259 C260 C261			CK45FB1H102K CE04LW1C470M CE04LW1V100M CE04LW1H2R2M CE04LW1V100M	CERAMIC 1000PF K ELECTRØ 47UF 16WV ELECTRØ 10UF 35WV ELECTRØ 2.2UF 50WV ELECTRØ 10UF 35WV		
C262 C263-270 C271 C301, 302 C301, 302			CC45FSL1H101J CK45FF1H103Z CE04LW1A101M CE04LW1V100M CE04LW1V100M	CERAMIC 100PF J CERAMIC 0.010UF Z ELECTRØ 100UF 10WV ELECTRØ 10UF 35WV ELECTRØ 10UF 35WV	KPYMXT	7 6
C303, 304 C303, 304 C305, 306 C305, 306 C307			CF92FV1H224J CF92FV1H224J CE04LW1V4R7M CE04LW1V4R7M CE04LW1V100M	MF 0.22UF J MF 0.22UF J ELECTRØ 4.7UF 35WV ELECTRØ 4.7UF 35WV ELECTRØ 10UF 35WV	KPYMXT KPYMXT KPYMXT	7 6 7 6 7
C307 C308 C308 C309, 310 C309, 310			CE04LW1V100M CQ92FM1H682J CQ92FM1H682J CK45FF1H103Z CK45FF1H103Z	ELECTRØ 10UF 35WV MYLAR 6800PF J MYLAR 6800PF J CERAMIC 0.010UF Z CERAMIC 0.010UF Z	KPYMXT KPYMXT KPYMXT KPYMXT	6 7 6 7 6

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C311			CE04LW1A101M	ELECTRØ 100UF 10WV		7
C311			CE04LW1A101M	ELECTRØ 100UF 10WV	KPYMXT	6
C312			CF92FV1H104J	MF 0.10UF J		7
C312			CF92FV1H104J	MF 0.10UF J	KPYMXT	6
C313-315			CE04LW1V100M	ELECTRØ 10UF 35WV		7
C313-315			CE04LW1V100M	ELECTRØ 10UF 35WV	KPYMXT	6
C316			CF92FV1H104J	MF 0.10UF J		7
C316			CF92FV1H104J	MF 0.10UF J	KPYMXT	6
C317			CE04LW1H010M	ELECTRØ 1.0UF 50WV		7
C317			CE04LW1H010M	ELECTRØ 1.0UF 50WV	KPYMXT	6
C318-321			CQ92FM1H223J	MYLAR 0.022UF J		7
C318-321			CQ92FM1H223J	MYLAR 0.022UF J	KPYMXT	6
C322-325			CF92FV1H334J	MF 0.33UF J		7
C322-325			CF92FV1H334J	MF 0.33UF J	KPYMXT	6
C326, 327			CF92FV1H224J	MF 0.22UF J		7
C326, 327			CF92FV1H224J	MF 0.22UF J	KPYMXT	6
C328			CK45FB1H681K	CERAMIC 680PF K		7
C328			CK45FB1H681K	CERAMIC 680PF K	KPYMXT	6
C329, 330			CF92FV1H104J	MF 0.10UF J		7
C329, 330			CF92FV1H104J	MF 0.10UF J	KPYMXT	6
C331			CK45FB1H681K	CERAMIC 680PF K		7
C331			CK45FB1H681K	CERAMIC 680PF K	KPYMXT	6
C332, 333			CF92FV1H104J	MF 0.10UF J		7
C332, 333			CF92FV1H104J	MF 0.10UF J	KPYMXT	6
C334			CK45FF1H103Z	CERAMIC 0.010UF Z		7
C334			CK45FF1H103Z	CERAMIC 0.010UF Z	KPYMXT	6
C335			CE04LW1A101M	ELECTRØ 100UF 10WV		7
C335			CE04LW1A101M	ELECTRØ 100UF 10WV	KPYMXT	6
C336			CF92FV1H104J	MF 0.10UF J		7
C336			CF92FV1H104J	MF 0.10UF J	KPYMXT	6
C337			CE04HW1E4R7M	NP-ELEC 4.7UF 25WV		7
C337			CE04HW1E4R7M	NP-ELEC 4.7UF 25WV	KPYMXT	6
C338			CE04LW1V100M	ELECTRØ 10UF 35WV		7
C338			CE04LW1V100M	ELECTRØ 10UF 35WV	KPYMXT	6
C339			CF92FV1H104J	MF 0.10UF J		7
C339			CF92FV1H104J	MF 0.10UF J	KPYMXT	6
C340, 341			CC45FSL1H101J	CERAMIC 100PF J		7
C340, 341			CC45FSL1H101J	CERAMIC 100PF J	KPYMXT	6
C342			CE04LW1H010M	ELECTRØ 1.0UF 50WV		7
C342			CE04LW1H010M	ELECTRØ 1.0UF 50WV	KPYMXT	6
C344			CE04LW1V100M	ELECTRØ 10UF 35WV		7
C344			CE04LW1V100M	ELECTRØ 10UF 35WV	KPYMXT	6
C345, 346			CE04LW1HR22M	ELECTRØ 0.22UF 50WV		7
C345, 346			CE04LW1HR22M	ELECTRØ 0.22UF 50WV	KPYMXT	6
C347			CC45FSL1H101J	CERAMIC 100PF J		7
C347			CC45FSL1H101J	CERAMIC 100PF J	KPYMXT	6
C348			CE04LW1H010M	ELECTRØ 1.0UF 50WV		7
C348			CE04LW1H010M	ELECTRØ 1.0UF 50WV	KPYMXT	6
C349			CE04LW1V4R7M	ELECTRØ 4.7UF 35WV		7
C349			CE04LW1V4R7M	ELECTRØ 4.7UF 35WV	KPYMXT	6
C350			CQ92FM1H103J	MYLAR 0.010UF J		7
C350			CQ92FM1H103J	MYLAR 0.010UF J	KPYMXT	6
C351			CQ92FM1H123J	MYLAR 0.012UF J		7
C351			CQ92FM1H123J	MYLAR 0.012UF J	KPYMXT	6
C352			CK45FB1H821K	CERAMIC 820PF K		7

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C352			CK45FB1H821K	CERAMIC 820PF K	KPYMXT	6
C353			CQ92FM1H103J	MYLAR 0.010UF J		7
C353			CQ92FM1H103J	MYLAR 0.010UF J	KPYMXT	6
C354			CQ92FM1H123J	MYLAR 0.012UF J		7
C354			CQ92FM1H123J	MYLAR 0.012UF J	KPYMXT	6
C355			CK45FB1H821K	CERAMIC 820PF K		7
C355			CK45FB1H821K	CERAMIC 820PF K	KPYMXT	6
C356			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		7
C356			CE04LW1V4R7M	ELECTRO 4.7UF 35WV	KPYMXT	6
C357			CE04LW1A101M	ELECTRO 100UF 10WV		7
C357			CE04LW1A101M	ELECTRO 100UF 10WV	KPYMXT	6
C358			CQ92FM1H392J	MYLAR 3900PF J		7
C358			CQ92FM1H392J	MYLAR 3900PF J	KPYMXT	6
C359			CE04LW1A101M	ELECTRO 100UF 10WV		7
C359			CE04LW1A101M	ELECTRO 100UF 10WV	KPYMXT	6
C360			CF92FV1H104J	MF 0.10UF J		7
C360			CF92FV1H104J	MF 0.10UF J	KPYMXT	6
C361			CE04LW1A101M	ELECTRO 100UF 10WV		7
C361			CE04LW1A101M	ELECTRO 100UF 10WV	KPYMXT	6
C362			CE04LW1V100M	ELECTRO 10UF 35WV		7
C362			CE04LW1V100M	ELECTRO 10UF 35WV	KPYMXT	6
C363			CE04LW1A101M	ELECTRO 100UF 10WV		7
C363			CE04LW1A101M	ELECTRO 100UF 10WV	KPYMXT	6
C364			CF92FV1H104J	MF 0.10UF J		7
C364			CF92FV1H104J	MF 0.10UF J	KPYMXT	6
C365			CK45FF1H103Z	CERAMIC 0.010UF Z		7
C365			CK45FF1H103Z	CERAMIC 0.010UF Z	KPYMXT	6
C366			CE04LW1A101M	ELECTRO 100UF 10WV		7
C366			CE04LW1A101M	ELECTRO 100UF 10WV	KPYMXT	6
C367, 368			CE04LW1V100M	ELECTRO 10UF 35WV		7
C367, 368			CE04LW1V100M	ELECTRO 10UF 35WV	KPYMXT	6
C369			CC45FSL1H101J	CERAMIC 100PF J		7
C369			CC45FSL1H101J	CERAMIC 100PF J	KPYMXT	6
C370			CQ92FM1H222J	MYLAR 2200PF J		7
C370			CQ92FM1H222J	MYLAR 2200PF J	KPYMXT	6
C371			CQ92FM1H102J	MYLAR 1000PF J		7
C371			CQ92FM1H102J	MYLAR 1000PF J	KPYMXT	6
C372			CE04LW1V100M	ELECTRO 10UF 35WV		7
C372			CE04LW1V100M	ELECTRO 10UF 35WV	KPYMXT	6
C373			CE04LW1H010M	ELECTRO 1.0UF 50WV		7
C373			CE04LW1H010M	ELECTRO 1.0UF 50WV	KPYMXT	6
C374			CE04LW1C470M	ELECTRO 47UF 16WV		7
C374			CE04LW1C470M	ELECTRO 47UF 16WV	KPYMXT	6
C375			CF92FV1H104J	MF 0.10UF J		7
C375			CF92FV1H104J	MF 0.10UF J	KPYMXT	6
C376			CF92FV1H334J	MF 0.33UF J		7
C376			CF92FV1H334J	MF 0.33UF J	KPYMXT	6
C377			CF92FV1H333J	MF 0.033UF J		7
C377			CF92FV1H333J	MF 0.033UF J	KPYMXT	6
C378			CQ92FM1H472J	MYLAR 4700PF J		7
C378			CQ92FM1H472J	MYLAR 4700PF J	KPYMXT	6
C379			CF92FV1H273J	MF 0.027UF J		7
C379			CF92FV1H273J	MF 0.027UF J	KPYMXT	6
C380			CE04LW1C220M	ELECTRO 22UF 16WV		7
C380			CE04LW1C220M	ELECTRO 22UF 16WV	KPYMXT	6

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C381			CE04LW1A101M	ELECTR0 100UF 10WV		7
C381			CE04LW1A101M	ELECTR0 100UF 10WV	KPYMXT	6
C382			CQ92FM1H822J	MYLAR 8200PF J		7
C382			CQ92FM1H822J	MYLAR 8200PF J	KPYMXT	6
C383			CE04LW1V100M	ELECTR0 10UF 35WV		7
C383			CE04LW1V100M	ELECTR0 10UF 35WV	KPYMXT	6
C384			CE04LW1H010M	ELECTR0 1.0UF 50WV		7
C384			CE04LW1H010M	ELECTR0 1.0UF 50WV	KPYMXT	6
C385			CE04LW1H0R1M	ELECTR0 0.1UF 50WV		7
C385			CE04LW1H0R1M	ELECTR0 0.1UF 50WV	KPYMXT	6
C386			CC45FSL1H101J	CERAMIC 100PF J		7
C386			CC45FSL1H101J	CERAMIC 100PF J	KPYMXT	6
C387			CE04LW1V4R7M	ELECTR0 4.7UF 35WV		7
C387			CE04LW1V4R7M	ELECTR0 4.7UF 35WV	KPYMXT	6
C388			CE04LW1H0R1M	ELECTR0 0.1UF 50WV		7
C388			CE04LW1H0R1M	ELECTR0 0.1UF 50WV	KPYMXT	6
C389			CE04LW1V4R7M	ELECTR0 4.7UF 35WV		7
C389			CE04LW1V4R7M	ELECTR0 4.7UF 35WV	KPYMXT	6
C390			CE04LW1H0R1M	ELECTR0 0.1UF 50WV		7
C390			CE04LW1H0R1M	ELECTR0 0.1UF 50WV	KPYMXT	6
C391			CE04LW1V4R7M	ELECTR0 4.7UF 35WV		7
C391			CE04LW1V4R7M	ELECTR0 4.7UF 35WV	KPYMXT	6
C392			CC45FSL1H101J	CERAMIC 100PF J		7
C392			CC45FSL1H101J	CERAMIC 100PF J	KPYMXT	6
C393			CE04LW1H0R1M	ELECTR0 0.1UF 50WV		7
C393			CE04LW1H0R1M	ELECTR0 0.1UF 50WV	KPYMXT	6
C394			CE04LW1V4R7M	ELECTR0 4.7UF 35WV		7
C394			CE04LW1V4R7M	ELECTR0 4.7UF 35WV	KPYMXT	6
C395, 396			CE04LW1V100M	ELECTR0 10UF 35WV		7
C395, 396			CE04LW1V100M	ELECTR0 10UF 35WV	KPYMXT	6
C397			CK45FB1H102K	CERAMIC 1000PF K		7
C397			CK45FB1H102K	CERAMIC 1000PF K	KPYMXT	6
C398			CE04LW1H010M	ELECTR0 1.0UF 50WV		7
C398			CE04LW1H010M	ELECTR0 1.0UF 50WV	KPYMXT	6
C399			CQ92FM1H392J	MYLAR 3900PF J		7
C399			CQ92FM1H392J	MYLAR 3900PF J	KPYMXT	6
C401-403			C90-3242-05	ELECTR0 4.7UF 35WV		7
C404			CE04LW1E101M	ELECTR0 100UF 25WV		7
C405			CK45FF1H103Z	CERAMIC 0.010UF Z		7
C406			CE04LW1V100M	ELECTR0 10UF 35WV		7
C408			CE04LW1V100M	ELECTR0 10UF 35WV		7
C409			CE04LW1V4R7M	ELECTR0 4.7UF 35WV		7
C410			CQ92FM1H103J	MYLAR 0.010UF J		7
C411			CK45FB1H821K	CERAMIC 820PF K		7
C412			CQ92FM1H123J	MYLAR 0.012UF J		7
C413			CQ92FM1H103J	MYLAR 0.010UF J		7
C414			CK45FB1H821K	CERAMIC 820PF K		7
C415			CQ92FM1H123J	MYLAR 0.012UF J		7
C416			C90-3242-05	ELECTR0 4.7UF 35WV		7
C417			C90-3205-05	ELECTR0 100UF 4WV		7
C418			CQ92FM1H392J	MYLAR 3900PF J		7
C419			CE04LW1A101M	ELECTR0 100UF 10WV		7
C420, 421			CF92FV1H104J	MF 0.10UF J		7
C422, 423			CE04LW1A101M	ELECTR0 100UF 10WV		7
C424			CC45FSL1H101J	CERAMIC 100PF J		7

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C425			CQ92FM1H123J	MYLAR 0.012UF J		7
C426			CQ92FM1H112J	MYLAR 1100PF J		7
C427			CQ92FM1H133J	MYLAR 0.013UF J		7
C428			CQ92FM1H123J	MYLAR 0.012UF J		7
C429			CQ92FM1H112J	MYLAR 1100PF J		7
C430			CQ92FM1H133J	MYLAR 0.013UF J		7
C431, 432			CE04LW1H010M	ELECTRO 1.0UF 50WV		7
C433, 434			CC45FSL1H100D	CERAMIC 10PF D		7
C435			CE04LW1V100M	ELECTRO 10UF 35WV		7
C442			CE04LW1V100M	ELECTRO 10UF 35WV		7
C443, 444		*	CE04LW1HR1M	ELECTRO 0.1MUF 50WV		7
C445, 446			CE04LW1V100M	ELECTRO 10UF 35WV		7
C447			CK45FB1H102K	CERAMIC 1000PF K		7
C448			CC45FSL1H101J	CERAMIC 100PF J		7
C501-506			CQ92FM1H102J	MYLAR 1000PF J		7
C501-506			CQ92FM1H102J	MYLAR 1000PF J	KPYMXT	6
C507			CE04LW1V100M	ELECTRO 10UF 35WV		7
C507			CE04LW1V100M	ELECTRO 10UF 35WV	KPYMXT	6
CN3	1B		E40-4163-05	FLAT CABLE CONNECTOR	KPX	
CN3	1B		E40-4167-05	FLAT CABLE CONNECTOR	YMTE	
J1			E20-0321-05	LOCK TERMINAL BOARD ANTENNA	TE	
J1			E20-0476-05	LOCK TERMINAL BOARD ANTENNA	KPYMX	
J201			E63-0068-05	PHONE JACK PHONE		
J202, 203			E63-0070-05	PHONE JACK CD, TAPE, VIDEO		
-			J11-0098-05	WIRE CLAMPER		6
CF1, 2			L72-0531-05	CERAMIC FILTER	KPYMX	
CF1, 2			L72-0536-05	CERAMIC FILTER	TE	
L1			L30-0467-05	AM IFT		
L2			L30-0439-25	FM IFT	KP	
L2			L30-0484-05	FM IFT	TE	
L2			L30-0494-05	FM IFT	YMX	
L3			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
L6, 7			L79-0790-05	LC FILTER	TE	
L8			L40-1091-17	SMALL FIXED INDUCTOR		
L9			L30-0485-05	FM IFT	TE	
L10			L40-1091-17	SMALL FIXED INDUCTOR	TE	
L11 -13			L40-1091-17	SMALL FIXED INDUCTOR	KPYMX	6
L106			L40-1091-17	SMALL FIXED INDUCTOR		
L107			L39-1309-05	COMBINATION COIL		
L108			L79-0125-05	LC FILTER	TE	
L301, 302			L40-1091-17	SMALL FIXED INDUCTOR		7
L301, 302			L40-1091-17	SMALL FIXED INDUCTOR	KPYMXT	6
L401, 402			L40-1091-17	SMALL FIXED INDUCTOR		7
X1			L77-1122-05	CRYSTAL RESONATOR 7.200MHz		
X2			L78-0295-05	RESONATOR 19.000kHz		
X301			L78-0601-05	RESONATOR 7.160MHz		7
X301			L78-0601-05	RESONATOR 7.160MHz	KPYMXT	6
X401			L78-0601-05	RESONATOR 7.160MHz		7
C	1B		N09-0333-05	TAPPING SCREW (3X12)		
H	1B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
R8			RD14NB2E101J	RD 100 J 1/4W		
R21			RD14NB2E470J	RD 47 J 1/4W	TE	

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R21			RD14NB2E680J	RD 68 J 1/4W	KPYMX	
R37			RD14NB2E101J	RD 100 J 1/4W		
R53			RS14KB3D221J	FL-PROOF RS 220 J 2W		
R111			RD14NB2E101J	RD 100 J 1/4W		
R177			RS14KB3D221J	FL-PROOF RS 220 J 2W	TE	
R261			RD14NB2E101J	RD 100 J 1/4W		
R276			RS14KB3A101J	FL-PROOF RS 100 J 1W		
R303, 304			RS14KB3D181J	FL-PROOF RS 180 J 2W	KPYMXT	7
R303, 304			RS14KB3D181J	FL-PROOF RS 180 J 2W		6
R352			RD14NB2E470J	RD 47 J 1/4W		7
R352			RD14NB2E470J	RD 47 J 1/4W	KPYMXT	6
R374, 375			RD14NB2E101J	RD 100 J 1/4W		7
R374, 375			RD14NB2E101J	RD 100 J 1/4W	KPYMXT	6
VR1			R12-3688-05	TRIMMING POT.(47K) FM TUNED		
VR3			R12-3686-05	TRIMMING POT.(22K) AM TUNED		
VR5			R12-6663-05	TRIMMING POT.(330K)SEPARATION		
S101			S31-2132-05	SLIDE SWITCH DE ENPHASYS,CH	YM	
S401			S31-2132-05	SLIDE SWITCH IMPEDANCE SELECT		7
D3			HZS5.1N(B2)	ZENER DIODE		
D3			RD5.1ES(B2)	ZENER DIODE		
D6 ,7			HSS104	DIODE	TE	
D6 ,7			1SS133	DIODE	TE	
D111,112			HSS104	DIODE		
D111,112			1SS133	DIODE		
D117-121			HSS104	DIODE	TE	
D117-121			1SS133	DIODE	TE	
D123			HZS5.1N(B2)	ZENER DIODE	TE	
D123			RD5.1ES(B2)	ZENER DIODE	TE	
D124			HZS13N(B2)	ZENER DIODE		
D124			RD13ES(B2)	ZENER DIODE		
D125			HSS104	DIODE	TE	
D125			1SS133	DIODE	TE	
D201			HZS6.2N(B2)	ZENER DIODE		
D201			RD6.2ES(B2)	ZENER DIODE		
D202			HZS8.2N(B2)	ZENER DIODE		
D202			RD8.2ES(B2)	ZENER DIODE		
D203			HZS3.9N(B2)	ZENER DIODE		
D203			RD3.9ES(B2)	ZENER DIODE		
D204			HZS5.6N(B2)	ZENER DIODE		
D204			RD5.6ES(B2)	ZENER DIODE		
D205-214			HSS104	DIODE		
D205-214			1SS133	DIODE		
D301			HZS5.6N(B2)	ZENER DIODE		7
D301			HZS5.6N(B2)	ZENER DIODE	KPYMXT	6
D301			RD5.6ES(B2)	ZENER DIODE		7
D301			RD5.6ES(B2)	ZENER DIODE	KPYMXT	6
D302, 303			HZS6.2N(B2)	ZENER DIODE		7
D302, 303			HZS6.2N(B2)	ZENER DIODE	KPYMXT	6
D302, 303			RD6.2ES(B2)	ZENER DIODE		7
D302, 303			RD6.2ES(B2)	ZENER DIODE	KPYMXT	6
D401			HZS5.6N(B2)	ZENER DIODE		7
D401			RD5.6ES(B2)	ZENER DIODE		7
D402-407			HSS104	DIODE		7

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D402-407 IC1 IC2 IC3 IC4			1SS133 LA1266 LA3401 LC7218 M5223P	DIODE IC(AM/FM IF) IC(FM MPX) IC(PLL SYNTHESIZER) IC(OP AMP X2)	TE	7
IC201 IC202 IC203 IC204 IC205			NJM4580D-D NJU7313L NJU7311L NJM4580D-D NJU7312L	IC(OP AMP X2) IC(ANALOG SWITCH) IC(ANALOG SWITCH) IC(OP AMP X2) IC(ANALOG SWITCH)		
IC301 IC301 IC302 IC302 IC303		* *	SSM2126P SSM2126P NE571N NE571N NJM4565L	IC(DOLBY SURROUND DECODER) IC(DOLBY SURROUND DECODER) IC(COMPANDOR) IC(COMPANDOR) IC(OP AMP X2)	KPYMXT KPYMXT	7 6 7 6 7
IC303 IC304 IC304 IC305 IC305			NJM4565L YM7128B YM7128B M5238AL M5238AL	IC(OP AMP X2) IC(DIGITAL SURROUND) IC(DIGITAL SURROUND) IC(OPAMP X2) IC(OPAMP X2)	KPYMXT KPYMXT KPYMXT	6 7 6 7 6
IC306 IC306 IC307 IC307 IC308-310			LA2730 LA2730 TC9213P TC9213P NJM4565L	IC(DOLBY SYSTEM) IC(DOLBY SYSTEM) IC(2CH ELECTRONIC VOLUME) IC(2CH ELECTRONIC VOLUME) IC(OP AMP X2)	KPYMXT KPYMXT	7 6 7 6 7
IC308-310 IC401 IC402 IC403 IC404, 405			NJM4565L NJM4565L YM7128B M5238AL NJM4565L	IC(OP AMP X2) IC(OP AMP X2) IC(DIGITAL SURROUND) IC(OPAMP X2) IC(OP AMP X2)	KPYMXT	6 7 7 7 7
IC406 IC407 Q1 Q2 Q3			TC9215P UPC4574C 2SC1923(R,Θ) 2SC1845(F,E) 2SC1740S(Q,R)	IC(ANALOG SWITCH X 6) IC(OP AMP X4) TRANSISTOR TRANSISTOR TRANSISTOR	KPYMX	7 7
Q3 Q3 ,4 Q3 ,4 Q7 Q7			2SC2785(F,E) 2SC1740S(Q,R) 2SC2785(F,E) 2SC1740S(Q,R) 2SC2785(F,E)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	KPYMX TE TE KPYMX KPYMX	
Q7 ,8 Q7 ,8 Q9 Q9 Q10			2SC1740S(Q,R) 2SC2785(F,E) 2SA1175(F,E) 2SA933S(Q,R) 2SC1740S(Q,R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	TE TE TE TE TE	
Q10 Q102 Q102 Q104 Q104			2SC2785(F,E) 2SA1175(F,E) 2SA933S(Q,R) 2SA1175(F,E) 2SA933S(Q,R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	TE	
Q107, 108 Q107, 108 Q113 Q113 Q113			2SC1740S(Q,R) 2SC2785(F,E) 2SD2012 2SD2061 2SD2374	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	YM YM	

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Q201			2SD2012	TRANSISTOR		
Q201			2SD2061	TRANSISTOR		
Q201			2SD2374	TRANSISTOR		
Q202, 203			2SC1740S(Q, R)	TRANSISTOR		
Q202, 203			2SC2458(Y, GR)	TRANSISTOR		
Q202, 203			2SC2785(F, E)	TRANSISTOR		
Q202, 203			2SC3311A(Q, R)	TRANSISTOR		
Q204			2SD2012	TRANSISTOR		
Q204			2SD2061	TRANSISTOR		
Q204			2SD2374	TRANSISTOR		
Q205, 206			2SA1048(Y, GR)	TRANSISTOR		
Q205, 206			2SA1175(F, E)	TRANSISTOR		
Q205, 206			2SA1309A(Q, R)	TRANSISTOR		
Q205, 206			2SA933S(Q, R)	TRANSISTOR		
Q207, 208			2SC2878(B)	TRANSISTOR		
Q209, 210			2SC1740S(Q, R)	TRANSISTOR		
Q209, 210			2SC2458(Y, GR)	TRANSISTOR		
Q209, 210			2SC2785(F, E)	TRANSISTOR		
Q209, 210			2SC3311A(Q, R)	TRANSISTOR		
Q211			2SC2003(L, K)	TRANSISTOR		
Q212			2SA1048(Y, GR)	TRANSISTOR		
Q212			2SA1175(F, E)	TRANSISTOR		
Q212			2SA1309A(Q, R)	TRANSISTOR		
Q212			2SA933S(Q, R)	TRANSISTOR		
Q213			2SC1740S(Q, R)	TRANSISTOR		
Q213			2SC2458(Y, GR)	TRANSISTOR		
Q213			2SC2785(F, E)	TRANSISTOR		
Q213			2SC3311A(Q, R)	TRANSISTOR		
Q301			2SC2003(L, K)	TRANSISTOR	KPYMXT	7
Q301			2SC2003(L, K)	TRANSISTOR		6
Q303, 304			2SC1740S(Q, R)	TRANSISTOR		7
Q303, 304			2SC1740S(Q, R)	TRANSISTOR	KPYMXT	6
Q303, 304			2SC2458(Y, GR)	TRANSISTOR		7
Q303, 304			2SC2458(Y, GR)	TRANSISTOR	KPYMXT	6
Q303, 304			2SC2785(F, E)	TRANSISTOR		7
Q303, 304			2SC2785(F, E)	TRANSISTOR	KPYMXT	6
Q303, 304			2SC3311A(Q, R)	TRANSISTOR		7
Q303, 304			2SC3311A(Q, R)	TRANSISTOR	KPYMXT	6
Q306			2SC1740S(Q, R)	TRANSISTOR		7
Q306			2SC1740S(Q, R)	TRANSISTOR	KPYMXT	6
Q306			2SC2458(Y, GR)	TRANSISTOR		7
Q306			2SC2458(Y, GR)	TRANSISTOR	KPYMXT	6
Q306			2SC2785(F, E)	TRANSISTOR		7
Q306			2SC2785(F, E)	TRANSISTOR	KPYMXT	6
Q306			2SC3311A(Q, R)	TRANSISTOR		7
Q306			2SC3311A(Q, R)	TRANSISTOR	KPYMXT	6
Q401			2SC2003(L, K)	TRANSISTOR		7
Q403-406			2SC2878(B)	TRANSISTOR		7
			W02-1041-15	FM FRONT-END ASSY	TE	
			W02-1042-15	FM FRONT-END ASSY	KPYMX	

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
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## SPECIFICATIONS

[K, P, M, X, Y type]

(For U.S.A. and Canada)

### Audio section

Rated power output at the STEREO operation

100 watts per channel minimum RMS, both channels driven at 8  $\Omega$ , from 20 Hz to 20,000 Hz with no more than 0.06% total harmonic distortions. (FTC)

Power output at the Surround operation

Front (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 65 W + 65 W  
Center (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 65 W  
Rear (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 20 W + 20 W

Total harmonic distortion (1 kHz, 8  $\Omega$ ) .... 0.03% at 50 W

Signal to noise ratio (IHF A)

PHONO (MM) ..... 78 dB  
CD, TAPE, VIDEO ..... 100 dB

Input sensitivity / impedance

PHONO (MM) ..... 2.5 mV / 47 k $\Omega$   
CD, TAPE, VIDEO ..... 200 mV / 47 k $\Omega$

Tone controls

BASS .....  $\pm 10$  dB (at 100 Hz)  
TREBLE .....  $\pm 10$  dB (at 10 kHz)

Loudness control at - 30 dB VOLUME level

..... 0 ~ + 8 dB (100 Hz)

### Video section

VIDEO inputs / outputs(Composite) ..... 1 Vp-p / 75  $\Omega$

### FM Tuner section

Tuning frequency range ..... 87.5 MHz~108 MHz

Usable sensitivity (IHF) ..... 10.8 dBf (0.95  $\mu$ V at 75  $\Omega$ )

50 dB quieting sensitivity

MONO ..... 17.2 dBf (2.0  $\mu$ V at 75  $\Omega$ )

STEREO ..... 41.2 dBf (32  $\mu$ V at 75  $\Omega$ )

Total harmonic distortion at 1 kHz

MONO ..... 0.4%

STEREO ..... 0.5%

Signal to noise ratio at 65 dBf (IHF)

MONO ..... 78 dB

STEREO ..... 73 dB

Selectivity (IHF  $\pm 400$  kHz) ..... 53 dB

Stereo separation (IHF at 1 kHz) ..... 45 dB

Frequency response.. 30 Hz~15 kHz, +0.5 dB,- 2.0 dB

### AM Tuner section

Tuning frequency range ..... 530 kHz~1,700 kHz

Usable sensitivity ..... 12  $\mu$ V / (400  $\mu$ V / m)

Total harmonic distortion ..... 0.3 %

Signal to noise ratio ..... 50 dB

Selectivity ..... 30 dB

### General

Power consumption ..... 3 A

AC outlet

SWITCHED ..... 2: (total 200 W, 1.6 A max.)

Dimensions ..... W:440 mm (17-5/16")

H:147 mm (5-13/16")

D:403 mm (15-7/8")

Weight (net) ..... 11.4 kg (25.1 lb)

(For other countries)

### Audio section

Rated power output at the STEREO operation

(IHF '66) from 20 Hz to 20 kHz,

0.06% T.H.D., at 8  $\Omega$  ..... 100 W + 100 W

Power output at the Surround operation

Front (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 65 W + 65 W

Center (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 65 W

Rear (1 kHz, 0.9% T.H.D. at 8  $\Omega$ ) ..... 20 W + 20 W

Total harmonic distortion (1 kHz, 8  $\Omega$ ) 0.03% at 50 W

Signal to noise ratio (IHF'66)

PHONO (MM) ..... 78 dB

CD, TAPE, VIDEO ..... 100 dB

Input sensitivity / impedance

PHONO (MM) ..... 2.5 mV / 47 k $\Omega$

CD, TAPE, VIDEO ..... 200 mV / 47k $\Omega$

Tone controls

BASS .....  $\pm 10$  dB (at 100 Hz)

TREBLE .....  $\pm 10$  dB (at 10 kHz)

Loudness control at - 30 dB VOLUME level

..... 0 ~ + 8 dB (100 Hz)

### Video section

VIDEO inputs / outputs(Composite) ..... 1 Vp-p / 75  $\Omega$

### FM Tuner section

Tuning frequency range ..... 87.5 MHz~108 MHz

Usable sensitivity (IHF) ..... 10.8 dBf (0.95  $\mu$ V at 75  $\Omega$ )

50 dB quieting sensitivity

MONO ..... 17.2 dBf (2.0  $\mu$ V at 75  $\Omega$ )

STEREO ..... 41.2 dBf (32  $\mu$ V at 75  $\Omega$ )

Total harmonic distortion at 1 kHz

MONO ..... 0.4 %

STEREO ..... 0.5 %

Signal to noise ratio at 65 dBf (IHF)

MONO ..... 78 dB

STEREO ..... 73 dB

Selectivity (IHF  $\pm 400$  kHz) ..... 53 dB

Stereo separation (IHF at 1 kHz) ..... 45 dB

Frequency response . 30 Hz~15 kHz, + 0.5 dB,- 2.0 dB

### AM Tuner section

Tuning frequency range

9 kHz ..... 531 kHz ~ 1,602 kHz

10 kHz ..... 530 kHz ~ 1,610 kHz

Usable sensitivity ..... 12  $\mu$ V / (400  $\mu$ V / m)

Total harmonic distortion ..... 0.3 %

Signal to noise ratio ..... 50 dB

Selectivity ..... 30 dB

### General

Power consumption ..... 280 W

AC outlet

SWITCHED ..... 2: ( total 200 W max.)

(Except for Australia)

Dimensions ..... W:440 mm

H:147 mm

D:403 mm

Weight (net) ..... 11.4 kg

Note:

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice



# KR-V6050/7050

## SPECIFICATIONS

[E, T type]

### Audio section

Rated power output at the STEREO operation  
at 1 kHz, 8  $\Omega$  (DIN) ----- 100 W + 100 W

Power output at the Surround operation

Front	(1 kHz, 0.9% at 8 $\Omega$ )	----- 65 W + 65 W
Center	(1 kHz, 0.9% at 8 $\Omega$ )	----- 65 W
Rear	(1 kHz, 0.9% at 8 $\Omega$ )	----- 20 W + 20 W

Total harmonic distortion (1 kHz, 8  $\Omega$ ) 0.03% at 50 W

Signal to noise ratio

PHONO (MM)	----- 56 dB (DIN, 50 mW output)
CD, TAPE, VIDEO	----- 57dB (DIN, 50 mW output)

Input sensitivity / impedance

PHONO (MM)	----- 2.5 mV / 47 k $\Omega$
CD, TAPE, VIDEO	----- 200 mV / 47k $\Omega$

Tone controls

BASS	----- $\pm 10$ dB (at 100 Hz)
TREBLE	----- $\pm 10$ dB (at 10 kHz)

Loudness control at 30 dB

VOLUME level	----- 0 ~ + 8 dB (100 Hz)
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### Video section

VIDEO inputs/outputs  
(composite) ----- 1 Vp-p/75 $\Omega$

### FM Tuner section

Tuning frequency range ----- 87.5 MHz~108 MHz

Usable sensitivity (DIN at 75  $\Omega$ )

MONO	----- 1.1 $\mu$ V
STEREO	----- 45 $\mu$ V

Total harmonic distortion at 1 kHz (DIN)

MONO	----- 0.15%
STEREO	----- 0.5%

Signal to noise ratio (DIN weighted at 1 kHz)

MONO	----- 68 dB (65.2 dBf input)
STEREO	----- 61 dB (65.2 dBf input)

Selectivity (DIN  $\pm 300$  kHz) ----- 53 dB

Stereo separation (DIN)

1 kHz	----- 40 dB
6.3 kHz	----- 33 dB

Frequency response ---- 30 Hz~15 kHz, + 0.5 dB, - 2.0 dB

### AM Tuner section

Tuning frequency range ----- 531 kHz ~ 1,602 kHz

Usable sensitivity ----- 12  $\mu$ V / (400  $\mu$ V / m)

Total harmonic distortion ----- 0.3 %

Signal to noise ratio  
(at 30% mod. 1mV input) ----- 50 dB

Selectivity ----- 30 dB

### General

Power consumption ----- 280 W

AC outlet

SWITCHED	----- 2: (total 200 W max)
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Dimensions ----- W:440 mm  
H:147 mm  
D:403 mm

Weight (net) ----- 11.4 kg